A.3_pathway_reference_human_signaling_model.pdf

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pathway Death_Receptor	
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	19176525

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pathway Growth_Hormone

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pathway Neurotrophin

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pathway ERK5_signaling

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pathway Integrin_signaling

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pathway FGF

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pathway NOTCH

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A.4_miRNA_validation_reference_human_signaling_model.pdf

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	ENSG00000121879	18708351
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	ENSG00000139618	18708351
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	ENSG00000197122	20700123
	ENSG00000141736	18708351
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	ENSG00000106123	20015148
	ENSG00000109320	20015148
	ENSG00000232810	20015148
mir-342(MI0000805)		
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	ENSG00000125347	19151778
	ENSG00000111276	18708351
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	ENSG00000168685	19954774
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	ENSG00000171862	19175831

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	ENSG00000197461	19396864
	ENSG00000187098	20439467
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	ENSG00000115170	16822819
	ENSG00000197122	19878981
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	ENSG00000112242	19864316
	ENSG00000147889	19396864
	ENSG00000019991	19396864
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mir-3146(MI0014172)		
mir-3194(MI0014239)		
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	ENSG00000136997	18413726
	ENSG00000136997	19211792
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	ENSG00000146648	20818338
	ENSG00000147889	20309945

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	ENSG00000136997	20309945
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	ENSG00000141510	18185580
	ENSG00000041982	18373886
	ENSG00000041982	18185580
	ENSG00000133703	18185580
	ENSG00000149311	18185580
	ENSG00000064012	18185580
	ENSG00000121879	18185580
	ENSG00000138376	18185580
	ENSG00000051180	18185580
	ENSG00000084774	20528768
	ENSG00000145715	20933506
	ENSG00000139687	20713524
	ENSG00000124813	21164520
	ENSG00000145715	20065103
	ENSG00000077782	20065103

	ENSG00000033800	20065103
	ENSG00000125740	20065103
	ENSG00000150995	20065103
	ENSG00000132170	19460359
	ENSG00000050748	20065103
	ENSG00000169032	20065103
mir-657(MI0003681)		
	ENSG00000197081	18602895
mir-658(MI0003682)		
	ENSG00000101412	19175831
	ENSG00000171862	19175831
mir-605(MI0003618)		
	ENSG00000125084	19336450
	ENSG00000168646	19336450
	ENSG00000135679	21217645
	ENSG00000141510	21217645
mir-337(MI0000806)		
	ENSG00000254087	19290526
	ENSG00000197122	19290526
mir-661(MI0003669)		
	ENSG00000124216	20543867
mir-662(MI0003670)		
	ENSG00000134323	20809117
mir-659(MI0003683)		
mir-660(MI0003684)		
	ENSG00000107882	19022373
mir-599(MI0003611)		
mir-598(MI0003610)		
mir-597(MI0003609)		
mir-596(MI0003608)		
mir-603(MI0003616)		
mir-602(MI0003615)		
	ENSG00000078900	20364114
mir-601(MI0003614)		
	ENSG00000109320	19889580
mir-600(MI0003613)		

A.5_Feedback_loops.pdf

Loop Type	Simplified Loop-Path	Participating Pathways
Negative Feedback	IL10 →→ JAK1:TYK2 →→ STAT3 →→ SOCS1 –| JAK1:TYK2	JAK_STAT
Negative Feedback	IL10 →→ JAK1:TYK2 →→ IRS1 →→ ERK →→ EST2 →→ SOCS1 –| JAK1:TYK2	JAK_STAT, MAPK_signaling
Negative Feedback	PRL →→ JAK2 →→ STAT3 →→ SOCS1 –| JAK2	Prolactin_Receptor
Negative Feedback	PRL →→ JAK2 →→ IRS1 →→ ERK →→ EST2 →→ SOCS1 –| JAK2	Prolactin_Receptor
Negative Feedback	PRL →→ JAK2 →→ ERK→→ SP3 →→ SOCS3 –| JAK2	Prolactin receptor, MAPK_signaling
Negative Feedback	IL9 →→ JAK1:JAK3 →→ ERK →→MYB →→ SOCS3 –| JAK1:JAK3	JAK_STAT, MAPK_signaling
Negative Feedback	CNTF →→ JAK1:JAK2 →→ IRS1 →→ MYB →→ SOCS3 –| JAK1:JAK2	GP130, InsulinR_signaling
Negative Feedback	GH2 →→ JAK2 →→ IRS1 →→ MYB →→ SOCS3 –| JAK2	Growth_Hormone, InsulinR_signaling
Negative Feedback	IFNG →→ JAK1:JAK2 →→ IRS1 →→MYB →→ SOCS3 –| JAK1:JAK2	JAK_STAT, InsulinR_signaling
Negative Feedback	IL6 →→JAK1:TYK2 →→IRS1 →→ MYB →→ SOCS3 –| JAK1:TYK2	GP130, InsulinR_signaling
Negative Feedback	CSF2 →→ JAK2 →→ SHC →→ ERK →→ SP3 →→ SOCS3 –| JAK2	BETA_chain, InsulinR_signaling
Negative Feedback	IL11 →→ JAK1:JAK2 →→ SHC →→ ERK →→ SP3 →→ SOCS3 –| JAK1:JAK2	GP130, InsulinR_signaling
Negative Feedback	CTF1 →→ JAK1:JAK2 →→ SHC →→ ERK →→ SP3 →→ SOCS3 –| JAK1:JAK2	GP130, InsulinR_signaling
Negative Feedback	OSM →→JAK1:JAK2 →→ SHC →→ERK →→ SP3 →→ SOCS3 –| JAK1:JAK2	GP130, InsulinR_signaling
Negative Feedback	EGFR:EREG →→ SRC →→ STAT5 →→ CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	EGFR:EGF →→ SRC →→ STAT5 →→ CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	CNTF →→ JAK1:JAK2 →→ SRC →→ STAT5 →→ CISH –| STAT5	GP130
Negative Feedback	IL5 →→ JAK2 →→ SRC →→ STAT5 →→ CISH –| STAT5	JAK_STAT
Negative Feedback	CSF →→ JAK2 →→ STAT5 →→ CISH –| STAT5	BETA_chain

Negative Feedback	IL11 →→ JAK1:TYK2 →→ STAT5 →→ CISH –| STAT5	GP130
Negative Feedback	EGFR:BTC →→ SRC →→ STAT5 →→ CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	ERBB4:NRG →→ STAT5 →→ CISH –| STAT5	ERBB_signaling, JAK_STAT
Negative Feedback	IL9 →→ JAK1:TYK2 →→ STAT5 →→ CISH –| STAT5	GAMMA_chain
Negative Feedback	CSF3 →→ JAK1:TYK2 →→ STAT5 →→ CISH –| STAT5	GP130
Negative Feedback	EGFR:AREG →→ SRC →→ STAT5 →→ CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	IL15 →→ JAK1:JAK3 →→ STAT5 →→ CISH –| STAT5	GAMMA_chain
Negative Feedback	IFNB →→ JAK1:TYK2 →→ STAT5 →→ CISH –| STAT5	JAK_STAT
Negative Feedback	IFNB →→ JAK1:TYK2 →→ STAT3 →→ CISH –| STAT3	JAK_STAT
Negative Feedback	LIF →→ JAK1:TYK2 →→ STAT5 →→ CISH –| STAT5	GP130
Negative Feedback	EGFR:TGFA →→ SRC →→ STAT5 →→ CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	IFNG →→ JAK1:JAK2 →→ STAT5 →→ CISH –| STAT5	JAK_STAT
Negative Feedback	IL10 →→ JAK1:TYK2 →→ STAT3 →→ CISH –| STAT3	JAK_STAT
Negative Feedback	HBEGF:ERBB4 →→ STAT5 →→ CISH –| STAT5	ERBB_signaling, JAK_STAT
Negative Feedback	EGFR:EGF →→ SRC →→ STAT5 →→ CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	OSM →→ JAK1:TYK2 →→ STAT5 →→ CISH –| STAT5	GP130
Negative Feedback	IL6 →→ JAK1:TYK2 →→ STAT3 →→ CISH –| STAT3	GP130
Negative Feedback	EGFR:HBEGF →→ SRC →→ STAT5 →→ CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	IL6 →→ JAK1:TYK2 →→ STAT5 →→ CISH –| STAT5	GP130
Negative Feedback	OSM →→ JAK1:JAK2 →→ STAT5 →→	GP130

	CISH –| STAT5	
Negative Feedback	TSLP → → JAK1:JAK3 → → STAT5 → → CISH –| STAT5	GAMMA_chain
Negative Feedback	TSLP → → JAK1:JAK3 → → STAT3 → → CISH –| STAT3	GAMMA_chain
Negative Feedback	CTF → → JAK1:JAK2 → → STAT3 → → CISH –| STAT3	GP130
Negative Feedback	ERBB4:EREG → → STAT5 → → CISH –| STAT5	ERBB_signaling, JAK_STAT
Negative Feedback	ERBB4:NRG → → STAT5 → → CISH –| STAT5	ERBB_signaling, JAK_STAT
Negative Feedback	CNTF → → JAK1:TYK2 → → STAT5 → → CISH –| STAT5	GP130
Negative Feedback	ERBB4:BTC → → STAT5 → → CISH –| STAT5	ERBB_signaling, JAK_STAT
Negative Feedback	EGFR:BTC → → SRC → → STAT5 → → CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	IL3 → → JAK2 → → STAT5 → → CISH –| STAT5	BETA_chain
Negative Feedback	EGFR:EREG → → SRC → → STAT5 → → CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	EGFR:HBEGF → → SRC → → STAT5 → → CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	IFNA → → JAK1:TYK2 → → STAT3 → → CISH –| STAT3	JAK_STAT
Negative Feedback	IFNA → → JAK1:TYK2 → → STAT5 → → CISH –| STAT5	JAK_STAT
Negative Feedback	IL7 → → JAK1:JAK2 → → STAT5 → → CISH –| STAT5	GAMMA_chain
Negative Feedback	EGFR:AREG → → SRC → → STAT5 → → CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	LIF → → JAK1:TYK2 → → STAT5 → → CISH –| STAT5	GP130
Negative Feedback	EGFR:TGFA → → SRC → → STAT5 → → CISH –| STAT5	EGFR_signaling, JAK_STAT
Negative Feedback	CSF3 → → JAK1:JAK2 → → STAT5 → → CISH –| STAT5	GP130
Negative Feedback	IL11 → → JAK1:JAK2 → → STAT3 → → CISH –| STAT3	GP130
Negative Feedback	IL11 → → JAK1:JAK2 → → STAT5 → →	GP130

	CISH –| STAT5	
Negative Feedback	PRL → →JAK2 → → STAT5 → → CISH –| STAT5	Prolactin_Receptor, JAK_STAT
Negative Feedback	GH1 → →JAK2 → → STAT5 → → CISH –| STAT5	Prolactin_Receptor, JAK_STAT
Negative Feedback	IL2 → →JAK1:JAK3 → → STAT5 → → CISH –| STAT5	GAMMA_chain
Negative Feedback	IL6 → →JAK1:JAK2 → → STAT5 → → CISH –| STAT5	GP130
Negative Feedback	IL6 → →JAK1:JAK2 → → STAT3 → → CISH –| STAT3	GP130
Negative Feedback	MYC:MAX → → CCND1/2/3:CDK4/6 → → RBL1 → → E2F4/5 –| MYC	Cell_Cycle
Negative Feedback	CCND1:CDK4/6 → → E2F4/5:RBL1 –|MYC → → VEGFA:KDR → → RAS → → ERK → → CCND1	Cell_Cycle, MAPK_signaling
Negative Feedback	CCND1:CDK4/6 → → E2F4/5:RBL1 –|MYC → → VEGFA:KDR → → RAS → → SP1 → → CCND1	Cell_Cycle, MAPK_signaling
Negative Feedback	CCND1:CDK4/6 → → E2F4/5:RBL1 –| MYC → → VEGFA:KDR → → RAS → → SP1 → → CCND1	Cell_Cycle, MAPK_signaling
Negative Feedback	CCND1:CDK4/6 → → E2F4/5:RBL1 –| MYC → → ERBB2 → → ERK → → CCND1	Cell_Cycle, ERBB_signaling
Negative Feedback	CCND1:CDK4/6 → → E2F4/5:RBL1 –| MYC → → ERBB2 → → RAS → → SP1 → → CCND1	Cell_Cycle, ERBB_signaling
Negative Feedback	LIF → → JAK1:JAK2 → → STAT3 → → SOCS1 –| JAK1:JAK2	GP130
Negative Feedback	LIF → → JAK1:JAK2 → → IRS1 → → ERK → → ETS2 → → SOCS1 –| JAK1:JAK2	GP130
Negative Feedback	IL11 → → JAK1:TYK2 → → STAT3 → → SOCS1 –| JAK1:TYK2	GP130
Negative Feedback	IL11 → → JAK1:TYK2 → → SHC1 → → KRAS → → ETS2 → → SOCS1 –| JAK1:TYK2	GP130
Negative Feedback	IL6 → → JAK1:TYK2 → → STAT3 → → SOCS1 –| JAK1:TYK2	GP130
Negative Feedback	IL6 → → JAK1:TYK2 → → SHC1 → → KRAS → → ETS2 → → SOCS1 –| JAK1:TYK2	GP130

Negative Feedback	IL4 →→ JAK1:JAK3 →→ STAT6 →→ SOCS1 –| JAK1:JAK3	GP130
Negative Feedback	IL4 →→ JAK1:JAK3 →→ IRS1 →→ RAS →→ ETS2 →→ SOCS1 –| JAK1:JAK3	GP130, InsulinR_signaling
Negative Feedback	IL13 →→ JAK2:TYK2 →→ STAT6 →→ SOCS1 –| JAK2:TYK2	GAMMA_chain
Negative Feedback	IL13 →→ JAK2:TYK2 →→ IRS1 →→ RAS →→ EST2 →→ SOCS1 –| JAK2:TYK2	GAMMA_chain, InsulinR_signaling
Negative Feedback	IL13 →→ JAK1:JAK2 →→ STAT6 →→ SOCS1 –| JAK2:JAK2	GAMMA_chain, InsulinR_signaling
Negative Feedback	IL13 →→ JAK2:JAK2 →→ IRS1 →→ RAS →→ EST2 →→ SOCS1 –| JAK2:JAK2	GAMMA_chain
Negative Feedback	GH1 →→ JAK2 →→ STAT3 →→ SOCS1 –| JAK2	Prolactin_Receptor
Negative Feedback	GH1 →→ JAK2 →→ IRS1 →→ ERK →→ EST2 →→ SOCS1 –| JAK2	Prolactin_Receptor, InsulinR_signaling
Negative Feedback	GH2 →→ JAK2 →→ STAT3 →→ SOCS1 –| JAK2	Growth_Hormone
Negative Feedback	GH2 →→ JAK2 →→ IRS1 →→ ERK →→ EST2 →→ SOCS1 –| JAK2	Growth_Hormone, InsulinR_signaling
Negative Feedback	IL6 →→ JAK1:JAK2 →→ STAT3 →→ SOCS1 –| JAK2	GP130
Negative Feedback	IL6 →→ JAK1:JAK2 →→ IRS1 →→ ERK →→ EST2 →→ SOCS1 –| JAK1:JAK2	GP130, InsulinR_signaling
Negative Feedback	IFNA→→ JAK1:TYK2 →→ STAT3 →→ SOCS1 –| JAK1:TYK2	JAK_STAT
Negative Feedback	IFNA →→ JAK1:TYK2 →→ IRS →→ ERK →→ EST2 →→ SOCS1 –| JAK1:TYK2	JAK_STAT, InsulinR_signaling
Negative Feedback	IFNB→→ JAK1:TYK2 →→ STAT3 →→ SOCS1 –| JAK1:TYK2	JAK_STAT
Negative Feedback	IFNB →→ JAK1:TYK2 →→ IRS →→ ERK →→ EST2 →→ SOCS1 –| JAK1:TYK2	JAK_STAT, InsulinR_signaling
Negative Feedback	LIF →→ JAK1:TYK2 →→ STAT3 →→ SOCS1 –| JAK1:TYK2	GP130
Negative Feedback	LIF →→ JAK1:TYK2 →→ IRS →→ ERK →→ EST2 →→ SOCS1 –| JAK1:TYK2	GP130, InsulinR_signaling
Negative Feedback	TSLP →→ JAK1:JAK3 →→ STAT3 →→ SOCS1 –| JAK1:JAK3	GAMMA_chain

Negative Feedback	IL4 →→ JAK1:JAK3 →→ STAT6 →→ SOCS1 –| JAK1:JAK3	GAMMA_chain
Negative Feedback	IL4 →→ JAK1:JAK3 →→ IRS →→ ERK →→ EST2 →→ SOCS1 –| JAK1:JAK3	GAMMA_chain, InsulinR_signaling
Negative Feedback	IL7 →→ JAK1:JAK3 →→ STAT6 →→ SOCS1 –| JAK1:JAK3	GAMMA_chain
Negative Feedback	IL7 →→ JAK1:JAK3 →→ IRS →→ ERK →→ EST2 →→ SOCS1 –| JAK1:JAK3	GAMMA_chain, InsulinR_signaling
Negative Feedback	IRS2 →→ PIP3 →→ AKT –| FOXO3 →→ IRS2	InsulinR_signaling, FOXO_signaling
Negative Feedback	TNFRSF1B →→ JNKs –| FOXO3 →→ TNFRSF1B	Death_Receptor, FOXO_signaling
Negative Feedback	IGF2 →→ SHC:GRB2:SOS1 →→ ERK →→ HIF1A →→ IGFBP3 –| IGF2	InsulingR_signaling, HIF1A_signaling, MAPK_signaling

Positive Feedback	VEGFA →→ GRB2:SOS1 →→ KRAS →→ ERK →→ SP1 →→ VEGFA;	VEGF_signaling, MAPK_signaling
Positive Feedback	VEGFB →→ GRB2:SOS1 →→ KRAS →→ ERK →→ SP1 →→ VEGFB;	VEGF_signaling, MAPK_signaling
Positive Feedback	FLT1 →→ GRB2:SOS1 →→ KRAS →→ ERK →→ SP1 →→ FLT1;	VEGF_signaling, MAPK_signaling
Positive Feedback	IL10 →→ JAK1:TYK2 →→ STAT3 →→ IL10;	JAK_STAT
Positive Feedback	ERBB2:ERBB4:BTC →→ STAT5 →→ MYC:MAX →→ ERBB2	ERBB_signaling, JAK_STAT
Positive Feedback	ERBB2:ERBB3:NRG →→ STAT1 →→MYC:MAX →→ ERBB2	ERBB_signaling, JAK_STAT
Positive Feedback	ERBB2:ERBB4:NRG →→ STAT5 →→ MYC:MAX →→ ERBB2	ERBB_signaling, JAK_STAT
Positive Feedback	ERBB2:ERBB4:EREG →→STAT5 →→ MYC:MAX →→ ERBB2	ERBB_signaling, JAK_STAT
Positive Feedback	ERBB2:ERBB4:HBEGF →→ STAT5 →→ MYC:MAX →→ ERBB2	ERBB_signaling, JAK_STAT
Positive Feedback	E2F1:DP1/2:HDAC →→ E2F1	Cell_Cycle
Positive Feedback	MYC:MAX →→ MAX	Cell_Cycle
Positive Feedback	IL2 →→ JAK1:JAK3 →→STAT4/6 →→ IRF1 →→ IL2	JAK_STAT, Prolactin_Receptor
Positive Feedback	FOS:ATF4 →→ TP53 →→HRAS →→ ERK →→ ELK1/4 →→ FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:ATF4 →→ TP53 →→ TGFA →→ EGFR →→ STAT1 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:ATF4 →→ TP53 →→HRAS →→ ERK →→ CREB3 →→ FOS	TP53_signaling, MAPK_signaling
Positive Feedback	FOS:ATF4 →→ TP53 →→ TGFA →→ EGFR →→ ERK →→ CREB3 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:ATF4 →→ TP53 →→HRAS →→ ERK →→ SP1 →→ FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:ATF4 →→ TP53 →→ TGFA →→ EGFR →→ ERK →→ SP1 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:ATF4 →→ TP53 →→ EPHA2 →→ ERK →→ ELK1/4 →→ FOS	Ephrin_Eph_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:AFT4 →→ TP53 →→ EGFR →→ ERK →→ ELK1/4 →→ FOS	EGFR_signaling, TP53_signaling, MAPK_signaling

Positive Feedback	FOS:ATF4 →→ TP53 →→ EPHA2 →→ JNKs →→ FOS	Ephrin_Eph_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:ATF4 →→ TP53 →→ TGFA →→ JUN →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:ATF4 →→ TP53 →→HRAS →→ ERK →→ ATF2 →→ FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:ATF4 →→ TP53 →→ EPHA2 →→ ERK →→ ATF2 →→ FOS	Ephrin_Eph_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:AFT4 →→ TP53 →→ EGFR →→ ERK →→ ATF2 →→ FOS	EGFR_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:ATF4 →→ TP53 →→ TGFA →→ JAK1:JAK2 →→ STAT3 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:ATF4 →→ TP53 →→ TGFA →→ EGFR:ERBB2 →→ STAT3 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	IFNA →→ JAK1:TYK2 →→ STAT1 →→ IRF7 →→ IFNA	TLR_signaling, JAK_STAT,
Positive Feedback	IFNA →→ EIF2AK2 →→ TP53 →→ IRF7 →→ IFNA	TLR_signaling, TP53_signaling
Positive Feedback	IFNA →→ DAPK1 →→ TP53 →→ IRF7 →→ IFNA	Death_Receptor, TP53_signaling
Positive Feedback	IFNG →→ JAK1:JAK2 →→ STAT1 →→ IFNG	JAK_STAT
Positive Feedback	IL2RA →→ JAK1:JAK3 →→ STAT1/3/5 →→ IL2RA	GAMMA_chain
Positive Feedback	CCND1:ESR1 →→ MYC →→ VEGFA:KDR →→ GRB2:SOS1 →→ RAS →→ ERK →→ CCND1	Cell_Cycle, MAPK_signaling
Positive Feedback	CCND1:ESR1 →→ MYC →→ VEGFA:KDR →→ GRB2:SOS1 →→ RAS →→ SP1 →→ CCND1	Cell_Cycle, MAPK_signaling
Positive Feedback	CCND1:ESR1 →→ MYC →→ VEGFA:KDR →→ GRB2:SOS1 →→ RAS →→ SP1 →→ CCND1	Cell_Cycle, MAPK_signaling
Positive Feedback	CCND1:ESR1 →→ MYC →→ ERBB2 →→ RAS →→ ERK →→ CCND1	Cell_Cycle, ERBB_signaling
Positive Feedback	CCND1:ESR1 →→ MYC →→ ERBB2 →→ RAS →→ SP1 →→ CCND1	Cell_Cycle, ERBB_signaling
Positive Feedback	CCND1:ESR1 →→ CCND1	Cell_Cycle

Positive Feedback	TLR → → MYD88 → → IRF7 → → IFNA → → STAT1 → → MYD88	TLR_signaling, JAK_STAT
Positive Feedback	TLR → → MYD88 → → IRF7 → → IFNB → → STAT1 → → MYD88	TLR_signaling, JAK_STAT
Positive Feedback	OSM:IL6ST → → JAK1:TYK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	LEP:IL6ST → → JAK2 → → STAT3 → → IL6ST	GP130
Positive Feedback	CSF3:IL6ST → → JAK1:TYK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	CTF1:IL6ST → → JAK1:TYK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	IL6:IL6ST → → JAK1:TYK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	CNTF:IL6ST → → JAK1:TYK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	CNTF:IL6ST → → JAK1:JAK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	LIF1:IL6ST → → JAK1:JAK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	LIF1:IL6ST → → JAK1:TYK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	IL11:IL6ST → → JAK1:TYK2 → → STAT1/3 → → IL6ST	GP130
Positive Feedback	IL2 → →JAK1:JAK3 → → STAT4 → → IRF1 → → IL2	GAMMA_chain
Positive Feedback	ERK → → AR_dimer → → AR	MAPK_signaling, PI3K_AKT
Positive Feedback	TNK2 → → AR_dimer → → AR	InsulinR_signaling, PI3K_AKT
Positive Feedback	AKT → → AR_dimer → → AR	PI3K_AKT
Positive Feedback	TGFB2 → → SMAD2/3 → → TGFB2	TGF_beta
Positive Feedback	TGFB2 → → ERK → → TGFB2	TGF_beta
Positive Feedback	TGFB2 → → JNKs → →JUN → → TGFB2	TGF_beta
Positive Feedback	BDNF:NTRK2 → → PIP3 → → AKT → → CREB → → BDNF	BDNF_signaling
Positive Feedback	JUN → → TP53 → → ERK → → SP1 → → MYB → → JUN	P53_signaling, ATM_signaling
Positive Feedback	JUN → → ATF2 → → CTNNB → → JUN	ATF_signaling, WNT_signaling
Positive Feedback	JUN → → FOS → → SMAD2/3 → → JUN	ATF_signaling, TGF_beta
Positive Feedback	ATM → → TP53 → → VEGFA → → ERK	ATM_signaling, TP53_signaling,

	→ → SP1 → → ATF1 → → ATM	MAPK_signaling, VEGF_signaling
Positive Feedback	ARNT2 → → HIF1A → → VEGFA/B → → ERK → → SP1 → → ATF1 → → ARNT2	HIF1A_signaling, VEGF_signaling, MAPK_signaling
Positive Feedback	ATF3:JUN → → TP53 → → ATF3	HIF1A_signaling
Positive Feedback	ATF3:JUN → → TP53 → → TGFA → → ERK → → JUN → → ATF3	TP53_signaling, MAPK_signaling
Positive Feedback	EGR1 → → TP53 → → TGFA → → ERK → → ELK1/4 → → EGR1	MAPK_signaling, TP53_signaling
Positive Feedback	EGR1 → → TP53 → → EGFR → → ERK → → ELK1/4 → → EGR1	MAPK_signaling, TP53_signaling
Positive Feedback	EGR1 → → TP53 → → VEGFC → → ERK → → ELK1/4 → → EGR1	MAPK_signaling, TP53_signaling
Positive Feedback	EGR1 → → TP53 → → EGFR → → ERK → → CREB → → EGR1	MAPK_signaling, TP53_signaling
Positive Feedback	EGR1 → → TP53 → → TGFA → → ERK → → CREB→ → EGR1	MAPK_signaling, TP53_signaling
Positive Feedback	EGR1 → → TP53 → → VEGFA → → ERK → → CREB → → EGR1	MAPK_signaling, TP53_signaling
Positive Feedback	EGR1 → → MYB → → JUN → → ATF1 → → EGR1	ATM_signaling
Positive Feedback	EGR1 → → MYB → → MYC → → ERBB2 → → ERK → → ELK1/4 → → EGR1	ERBB_signaling, MAPK_signaling
Positive Feedback	EGR1 → → MYB → → MYC → → ERBB2 → → ERK → → CREB → → EGR1	ERBB_signaling, MAPK_signaling
Positive Feedback	EGR1 → → MYB → → MYC → → VEGFA → → ERK → → CREB → → EGR1	VEGF_signaling, MAPK_signaling
Positive Feedback	ESR1 → → RET → → CRK → → MKK4/7 → → JUN → → ESR1	P38MAPK , RET_signaling
Positive Feedback	ESR1 → → RET → → NCK1 → → JNK → → ATF1 → → ESR1	RET_signaling, p38MAPK
Positive Feedback	TEAD1 → → YAP1 → → TGFA → → ERK → → SP1 → → TEAD1	SWH_signaling, MAPK_signaling
Positive Feedback	TEAD1 → → YAP1 → → EPHA2 → → ERK → → SP1 → → TEAD1	SWH_signaling, Ephrin_Eph_signaling, MAPK_signaling
Positive Feedback	TGFB2 → → ERK → → JUN:FOS → → TGFB2	TGF_beta, MAPK_signaling
Positive Feedback	TGFB2 → → SMAD2/3 → → JUN → → TGFB2	TGF_beta

Positive Feedback	FN1 →→ ITGA4:ITGB7 →→ RAC:GTP →→ RAF →→ ERK →→ JUN:FOS →→ FN1	Integrin_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA4:ITGB7 →→ RAC:GTP →→ RAF →→ ERK →→ CREB →→ FN1	Integrin_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA4:ITGB7 →→ RHOA:GTP →→ IRS1 →→ ERK →→ CREB →→ FN1	Integrin_signaling, InsulinR_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA4:ITGB7 →→ RHOA:GTP →→ IRS1 →→ ERK →→ JUN:FOS →→ FN1	Integrin_signaling, InsulinR_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA4:ITGB7 →→ ILK →→ CTNNB →→ MYC →→ JUN:FOS →→ FN1	Integrin_signaling, InsulinR_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA5:ITGB1 →→ ILK →→ CTNNB →→ MYC →→ JUN:FOS →→ FN1	Integrin_signaling, InsulinR_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA5:ITGB1 →→ RHOA:GTP →→ IRS1 →→ ERK →→ CREB →→ FN1	Integrin_signaling, InsulinR_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA5:ITGB1 →→ RHOA:GTP →→ IRS1 →→ ERK →→ JUN:FOS →→ FN1	Integrin_signaling, InsulinR_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA5:ITGB1 →→ RAC:GTP →→ RAF →→ ERK →→ JUN:FOS →→ FN1	Integrin_signaling, MAPK_signaling
Positive Feedback	FN1 →→ ITGA5:ITGB1 →→ RAC:GTP →→ RAF →→ ERK →→ CREB →→ FN1	Integrin_signaling, MAPK_signaling
Positive Feedback	FOS:JUN →→ TP53 →→HRAS →→ ERK →→ CREB →→ FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:JUN →→ TP53 →→HRAS →→ ERK →→ SP1 →→ FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:JUN →→ TP53 →→HRAS →→ ERK →→ ELK1/3 →→ FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS:JUN →→ TP53 →→ TGFA →→ EGFR →→ STAT1 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:JUN →→ TP53 →→ TGFA →→ EGFR →→ ERK →→ CREB3 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:JUN →→ TP53 →→ TGFA →→ EGFR →→ ERK →→ SP1 →→ FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS:JUN →→ TP53 →→ EPHA2 →→ ERK →→ ELK1/4 →→ FOS	Ephrin_Eph_signaling, TP53_signaling,

		MAPK_signaling
Positive Feedback	FOS:JUN → → TP53 → → EGFR → → ERK → → ELK1/4 → → FOS	EGFR_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS: JUN → → TP53 → → EPHA2 → → JNKs → → FOS	Ephrin_Eph_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS: JUN → → TP53 → → TGFA → → JUN → → FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS: JUN → → TP53 → →HRAS → → ERK → → ATF2 → → FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS: JUN → → TP53 → → EPHA2 → → ERK → → ATF2 → → FOS	Ephrin_Eph_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS: JUN → → TP53 → → EGFR → → ERK → → ATF2 → → FOS	EGFR_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS: JUN → → TP53 → → TGFA → → JAK1:JAK2 → → STAT3 → → FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS: JUN → → TP53 → → TGFA → → EGFR:ERBB2 → → STAT3 → → FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS: JUN → → TP53 → →HRAS → → ERK → → ELK1/4 → → FOS	ATF_signaling, TP53_signaling, MAPK_signaling
Positive Feedback	FOS: JUN → → TP53 → → TGFA → → EGFR → → STAT1 → → FOS	EGFR_signaling, TP53_signaling, JAK_STAT
Positive Feedback	FOS: JUN → → TP53 → →HRAS → → ERK → → CREB3 → → FOS	TP53_signaling, MAPK_signaling
Positive Feedback	IFNB1 → →DAYK→ →TP53 → →HRAS → → ERK → → JUN:ATF2 → → IFNB1	JAK_STAT, MAPK_signaling
Positive Feedback	IFNB1 → →DAYK→ →TP53 → → EGFR → → ERK → → JUN:ATF2 → → IFNB1	EGFR_signaling, JAK_STAT TP53_signaling, MAPK_signaling
Positive Feedback	IL5 → → JAK2 → → SHC → → ERK → → JUN:FOSL2 → → IL5	JAK_STAT, MAPK_signaling
Positive Feedback	IL5 → → LYN → → MAP3K1 → → ESR1 → → MYC → → IL5	JAK_STAT, MAPK_signaling
Positive Feedback	CSF → → LYN → → MKK4/7 → → JNKs → → MAP3K7 → → NfkB → → CSF	JAK_STAT, NFkB_signaling
Positive Feedback	IGF2 → → SHC:GRB2:SOS1 → → ERK → → HIF1A → → IGF2	InsulingR_signaling, HIF1A_signaling, MAPK_signaling

Positive Feedback	TNF →→ TNF:TNFRSF1B:TRADD:TRAF2 →→ JNK →→ JUN →→JUN:ATF2 →→TNF	NfkB_signaling, TLR_signaling
Positive Feedback	TNF→→IL13:IL13RA:TNF→→FOSL2→→JUN:FOSL2→→FOSL2	GAMMA_chain, TLR_signaling
Positive Feedback	TNF→→IL4:IL13RA:IL4R:TNF→→FOSL2→→JUN:FOSL2→→FOSL2	GAMMA_chain, TLR_signaling
Positive Feedback	TNF→→TNF:TNFRSF21→→NFKB:RELA →→TNF	TLR_signaling, Death_Receptor, NFkB_signaling
Positive Feedback	IL6→→JAK1:JAK2→→IRS1→→PI3K→→PKC→→NFkB1:RELA→→IL6	NfkB_signaling, GP130
Positive Feedback	IL6→→JAK1:JAK2→→IRS1→→PI3K→→PKC→→NFkB2:RELB→→IL6	NfkB_signaling, GP130
Positive Feedback	IL6→→JAK1:TYK2→→PI3K→→PKC→→NFkB1:RELA→→IL6	NfkB_signaling, GP130
Positive Feedback	IFNB1 →→EIF2AK2→→TP53 →→HRAS →→ ERK →→ JUN:ATF2 →→ IFNB1	JAK_STAT, MAPK_signaling
Positive Feedback	IFNB1 →→EIF2AK2→→TP53 →→ EGFR →→ ERK →→ JUN:ATF2 →→ IFNB1	EGFR_signaling, JAK_STAT TP53_signaling, MAPK_signaling
Positive Feedback	IFNB1→→JAK1:TYK2→→IRS1→→PI3K →→PKC→→NFkB1:RELA→→IFNB1	JAK_STAT, NFkB_signaling
Positive Feedback	IFNB1→→JAK1:TYK2→→IRS1→→PI3K →→PKC→→NFkB2:RELA→→IFNB1	JAK_STAT, NFkB_signaling
Positive Feedback	IFNB1→→JAK1:TYK2→→IRS1→→PI3K →→AKT→→PRKCG→→ NFkB2:RELA→→IFNB1	JAK_STAT, NFkB_signaling
Positive Feedback	IL8→→CXCR1:IL8→→PTK2→→PLCG→→PKC→→NFkB1:RELA→→IL8	JAK_STAT, NFkB_signaling
Positive Feedback	IL8→→CXCR1:IL8→→PTK2→→PLCG→→PRKCG→→NFkB1:RELA→→IL8	JAK_STAT, NFkB_signaling
Positive Feedback	IL8→→CXCR1:IL8→→PTK2→→PLCG→→PRKCB→→NFkB1:RELA→→IL8	JAK_STAT, NFkB_signaling
Positive Feedback	IL8→→CXCR1:IL8→→PTK2→→PLCG→→PRKCA→→NFkB1:RELA→→IL8	JAK_STAT, NFkB_signaling
Positive Feedback	IL8→→CXCR1:IL8→→PTK2→→PLCG→→PRKCB→→NFkB2:RELB→→IL8	JAK_STAT, NFkB_signaling
Positive Feedback	TLR→→MYD88→→IRF7→→IFNA→→JAK1:TYK2→→STAT1→→IRF7	JAK_STAT, TLR_signaling
Positive Feedback	TLR→→MYD88→→IRF7→→IFNA→→JAK1:TYK2→→STAT2→→IRF7	JAK_STAT, TLR_signaling

Positive Feedback	TLR→ →MYD88→ →IRF7→ →IFNB1→ → JAK1:TYK2→ →STAT2→ →IRF7	JAK_STAT, TLR_signaling
Positive Feedback	TLR→ →MYD88→ →IRF7→ →IFNB1→ → JAK1:TYK2→ →STAT1→ →IRF7	JAK_STAT, TLR_signaling
Positive Feedback	RELB→ →NFkB2:RELB→ →RELB	NFkB_signaling
Positive Feedback	NFkB1→ →NFkB1:RELA→ →NFkB1	NFkB_signaling
Positive Feedback	NFkB2→ →NFkB2:RELB→ →NFkB2	NFkB_signaling

The detail information related to pathways is recorded in the Supplementary Table 2, 3 and 4.

A.9_HMMA_miRNA_reference.pdf

miRNA(ID)	Target	Pubmed
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	ENSG00000196839	17322061
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mir-376a-1(MI0000784)		
mir-375(MI0000783)		
	ENSG00000104267	15538371
	ENSG00000130816	21269386
	ENSG00000033627	20584986
	ENSG00000196305	20947516
	ENSG00000132932	19843643
mir-378b(MI0014154)		
mir-378(MI0000786)		
	ENSG00000171862	19175831
	ENSG00000119772	16236258
	ENSG00000130649	19945440
	ENSG00000170525	16236258
	ENSG00000117410	16236258
	ENSG00000109586	19844573
	ENSG00000104267	15538371
	ENSG00000115758	20432256
	ENSG00000131386	19844573
	ENSG00000085662	20353610
	ENSG00000131459	20353610
	ENSG00000105398	20484008
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	ENSG00000167910	21085987
	ENSG00000100292	21106538
mir-376c(MI0000776)		
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	ENSG00000147224	17322061
	ENSG00000229937	17322061
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	ENSG00000104267	15538371
mir-378c(MI0015825)		
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mir-578(MI0003585)		
mir-577(MI0003584)		
mir-519b(MI0003151)		
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	ENSG00000004468	18189265
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	ENSG00000164867	19733659
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	ENSG00000135318	20732359
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	ENSG00000171862	18429962
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	ENSG00000090060	15944709
	ENSG00000171766	15944709
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	ENSG00000132932	19843643
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	ENSG00000137869	21389341
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	ENSG00000171862	20103531
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	ENSG00000105851	19276373
	ENSG00000165458	20530248
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	ENSG00000135069	20378769
	ENSG00000121879	19276373
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	ENSG00000115339	15944709
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	ENSG00000124181	20514023
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mir-499(MI0003183)		
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	ENSG00000171862	14697198
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	ENSG00000114771	18519671
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	ENSG00000137869	18429962
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	ENSG00000171862	21040528
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mir-93(MI0000095)		
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	ENSG00000135069	20378769
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	ENSG00000170525	16236258
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	ENSG00000146701	19126397
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	ENSG00000166311	20382746
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	ENSG00000137869	19088369
	ENSG00000073756	19088369
	ENSG00000167588	15131085
	ENSG00000023330	19440340
	ENSG00000169710	19513126
	ENSG00000100292	20806079
	ENSG00000197713	20806079
	ENSG00000085231	20652617
	ENSG00000171862	20716115
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mir-3193(MI0014238)		
mir-3192(MI0014237)		
mir-3195(MI0014240)		
mir-199b(MI0000282)		
mir-663(MI0003672)		
	ENSG00000143819	20423455
	ENSG00000171862	20637737
mir-663b(MI0006336)		
mir-3909(MI0016413)		
mir-335(MI0000816)		
	ENSG00000121879	18185580
	ENSG00000084774	20528768
	ENSG00000165458	20065103

	ENSG00000169710	19460359
mir-657(MI0003681)		
mir-658(MI0003682)		
	ENSG00000171862	19175831
mir-605(MI0003618)		
mir-337(MI0000806)		
mir-661(MI0003669)		
mir-662(MI0003670)		
mir-659(MI0003683)		
mir-660(MI0003684)		
mir-599(MI0003611)		
mir-598(MI0003610)		
mir-597(MI0003609)		
mir-596(MI0003608)		
mir-603(MI0003616)		
mir-602(MI0003615)		
mir-601(MI0003614)		
	ENSG00000169710	19889580
mir-600(MI0003613)		

B.2_U2OS_match.pdf

Ensemble	Simulation Data	Experimental Data
ENSG00000172845	22.528398	238110
ENSG00000078902	7.171295	9633300
ENSG00000116954	4.37769	3699100
ENSG00000145715	11.545129	1911000
ENSG00000144840	0.274467	1833600
ENSG00000153707	0	758580
ENSG00000137154	10390.35525	463170000
ENSG00000196396	85.685725	67542000
ENSG00000165119	549.241025	1323100000
ENSG00000169398	8.835683	15009000
ENSG00000167136	1.494191	160240
ENSG00000085733	741.907976	311020000
ENSG00000181222	3.060015	16334000
ENSG00000164733	700.46375	206680000
ENSG00000127191	6.763121	2156300
ENSG00000141564	2.79909	298340
ENSG00000136238	2400.006373	270010000
ENSG00000100324	8.375537	667650
ENSG00000151748	7.650005	1640500
ENSG00000115317	8.834623	1157500
ENSG00000132155	17.107958	231520
ENSG00000134057	2532.887625	29894000
ENSG00000076555	0.328801	1364100
ENSG00000169564	644.8537	353770000
ENSG00000150593	4.2867	1818100
ENSG00000111057	131.292	1400000000
ENSG00000080839	1.066721	100740
ENSG00000117394	111.77925	30762000
ENSG00000140044	1.395517	522440
ENSG00000145675	3.838908	4028100
ENSG00000198742	5.231193	47716
ENSG00000108854	3.669882	1037100
ENSG00000144554	8.767193	6975600
ENSG00000147403	129.303	238200000
ENSG00000049759	2.30054	4249600
ENSG00000109971	2221.420991	5200000000
ENSG00000002330	11.6463	1539500
ENSG00000168040	12.974325	4913900
ENSG00000186575	71.145817	12243000
ENSG00000149269	11.580173	10188000
ENSG00000139687	0.770176	13983000
ENSG00000177889	59.007275	185580000
ENSG00000168214	4.977403	361600
ENSG00000164924	158.2163	1247300000
ENSG00000173039	14.235126	11165000
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ENSG00000121691	15.821127	9014700
ENSG00000096717	7.354237	1629800
ENSG00000132470	2.535338	6065000
ENSG00000145386	7.853552	1139300
ENSG00000127946	4.830204	176380

ENSG00000184047	15.449485	16836000
ENSG00000135932	21.347585	24198000
ENSG00000179222	25.287115	709620
ENSG00000132109	2.68578	2928800
ENSG00000123836	4.183474	3735000
ENSG00000168610	4.757419	37469000
ENSG00000113721	2.45056	1183500
ENSG00000175354	3.828135	7314800
ENSG00000063046	37.868724	88541000
ENSG00000110092	280.55485	458280
ENSG00000175054	1.991001	345560
ENSG00000095002	10.6702	107010000
ENSG00000137275	8.619741	13523000
ENSG00000196712	11.66935	2398800
ENSG00000141551	17.420132	5613700
ENSG00000085832	10.795125	9707700
ENSG00000177885	44.102174	86104000
ENSG00000117632	1142.64625	399520000
ENSG00000107099	0.284335	423490
ENSG00000172216	26.844875	643650
ENSG00000167658	10835.2331	2203600000
ENSG00000155876	20.756444	3505200
ENSG00000103653	24.636725	23487000
ENSG00000051180	3.393864	957470
ENSG00000161638	4.834365	3675000
ENSG00000187678	0.088199	42085
ENSG00000100614	18.830425	38902000
ENSG00000064012	8.549857	2076300
ENSG00000123374	66.459491	42627000
ENSG00000145604	6.731226	1545000
ENSG00000135333	0	138360
ENSG00000077150	2.420959	6458300
ENSG00000111679	0	17905000
ENSG00000105329	0.399596	987990
ENSG00000140464	2.421491	12729000
ENSG00000160741	1.214909	374750
ENSG00000146648	981.793455	95415000
ENSG00000100393	2.019248	418920
ENSG00000111640	6097.4225	4505900000
ENSG00000103319	2.102591	367430
ENSG00000078747	2.278037	6857300
ENSG00000166333	142.076475	78186000
ENSG00000156709	9.618208	32168000
ENSG00000041982	13.793973	1001300
ENSG00000115414	0.17324	558490
ENSG00000117450	4033.953444	2279200000
ENSG00000100387	34.311283	5432200
ENSG00000168036	161.798733	45035000
ENSG00000133818	7.260683	40435000
ENSG00000141959	36.6124	37302000
ENSG00000143499	16.727175	2047900
ENSG00000151247	7.628195	59651000

ENSG00000166851	16.849222	7606200
ENSG00000065559	3.62342	3416000
ENSG00000150093	4731.408645	249200000
ENSG00000170581	6.121415	1764900
ENSG00000106211	2824.8976	2053600000
ENSG00000108443	8.254043	2192400
ENSG00000088832	123.33125	90199000
ENSG00000139926	39.565	1192600
ENSG00000197122	7.412781	1178200
ENSG00000141510	5.866428	1239800
ENSG00000083750	3.125615	3505200
ENSG00000082701	29.65933	11871000
ENSG00000123268	11.435329	4638600
ENSG00000015475	2.427902	8439600
ENSG00000175793	1340.335	1135300000
ENSG00000166913	3407.1725	833790000
ENSG00000106615	7.541339	12485000
ENSG00000026103	0.316592	739190
ENSG00000143776	3.116216	224920
ENSG00000012983	1.598808	2354100
ENSG00000146072	0.929021	1221500
ENSG00000172115	164.95618	117680000
ENSG00000070831	140.587958	95660000
ENSG00000158092	4.837993	1705300
ENSG00000118260	9.978388	4638600
ENSG00000116030	1.677731	16792000
ENSG00000132323	17.609147	35200000
ENSG00000180370	39.883145	45223000
ENSG00000115415	443.522017	180030000
ENSG00000166888	6.275215	1598200
ENSG00000005339	1.49204	1417800
ENSG00000149554	0.01906	2901800
ENSG00000109320	1.736076	1867100
ENSG00000148773	50.31885	154620000
ENSG00000130669	11.393228	5574500
ENSG00000013364	357.13875	110970000
ENSG00000184216	35.528276	2474900
ENSG00000091409	1.846966	11423000
ENSG00000069869	4.933985	4418000
ENSG00000137693	19.78485	10365000
ENSG00000165806	6.304491	3408600
ENSG00000138794	2.583895	5819300
ENSG00000116062	358.3265	137730000
ENSG00000177425	0.658668	2508500
ENSG00000179295	7.514733	32914000
ENSG00000066044	83.2792	150330000
ENSG00000105976	9.044084	442400
ENSG00000114978	61.039073	58666000
ENSG00000126583	0.243806	79227
ENSG00000072062	23.4656	20549000
ENSG00000165025	0	0
ENSG00000072501	13.407861	60239000

ENSG00000170312	2352.210125	365420000
ENSG00000109332	30.30143	23490000
ENSG00000114867	2762.850928	353060000
ENSG00000154229	26.09819	11318000
ENSG00000132341	3259.445	1221800000
ENSG00000074800	11610.675	5495500000
ENSG00000113558	16.503433	31288000
ENSG00000166508	683.574	260850000
ENSG00000132142	16.76803	26514000
ENSG00000117748	13.998477	19520000
ENSG00000174791	3.125629	6218900
ENSG00000110395	2.241543	1440800
ENSG00000187840	59.062041	0
ENSG00000023734	1367.39692	226290000
ENSG00000067560	2287.788175	245470000
ENSG00000075415	814.09825	158020000
ENSG00000071051	19.422021	6658400
ENSG00000183735	6.17506	1852400
ENSG00000197905	13.520528	1477400
ENSG00000075426	32.60575	2189000
ENSG00000204673	3.605454	6394400
ENSG00000129559	35.39295	50558000
ENSG00000143727	46.004613	42163000
ENSG00000112210	9.025317	8296900
ENSG00000126456	8.584826	1166900
ENSG00000170558	28.0189	17441000
ENSG00000133895	3.722246	1389700
ENSG00000142627	247.528442	79408000
ENSG00000119487	12.391892	347260
ENSG00000067225	10329.5575	3576500000
ENSG00000092969	35.409667	6414800
ENSG00000013374	3.151405	158170
ENSG00000025039	1.553167	3699100
ENSG00000171223	2.097464	70869
ENSG00000147065	1401.685	1402900000
ENSG00000108270	6.847708	11706000
ENSG00000159692	13.152555	20337000
ENSG00000205155	13.838368	430260
ENSG00000102580	9.012305	11909000
ENSG00000197081	30.057003	26903000
ENSG00000055332	25.040353	48213000
ENSG00000126458	9.655383	5390200
ENSG00000135318	10.242525	6046500
ENSG00000102144	1523.0925	1289200000
ENSG00000099942	11.9505	30946000
ENSG00000167193	56.171427	17671000
ENSG00000117362	14.352193	153460
ENSG00000162736	34.887343	19243000
ENSG00000120899	0.575304	6050200
ENSG00000114030	13.166	56254000
ENSG00000169047	8.395944	201240
ENSG00000145191	27.103033	28807000

ENSG00000136167	0.045611	8453900
ENSG00000159399	3.27371	13216000
ENSG00000106608	2.051562	241660
ENSG00000102871	2.214083	1506300
ENSG00000130396	1.283245	5868700
ENSG00000177606	16.676502	3452400
ENSG00000078061	26.025597	5092600
ENSG00000055130	0.021742	9325400
ENSG00000092820	28.583793	628500000
ENSG00000135341	5.595787	88570
ENSG00000101346	28.794225	38950000
ENSG00000198793	3.154742	5059000
ENSG00000126767	6.41437	32410
ENSG00000198561	66.720592	62058000
ENSG00000174775	19.693259	8148400
ENSG00000085511	4.400871	476310
ENSG00000158402	3.676545	463240
ENSG00000039068	0.20134	326560
ENSG00000160691	24.736645	2843500
ENSG00000138448	46.298933	26330000
ENSG00000089159	7.760107	8703300
ENSG00000087586	17.102742	2712000
ENSG00000123496	1.512034	2394200
ENSG00000196419	0	714040000
ENSG00000106070	4.339358	1123000
ENSG00000141646	3.55391	2230100
ENSG00000221978	17.954617	114720
ENSG00000112062	17.239685	8017700
ENSG00000153071	4.554435	3263800
ENSG00000047410	25.4376	140190000
ENSG00000164951	6.127115	563600
ENSG00000044524	0.38762	1594600
ENSG00000164171	11.909592	32054000
ENSG00000186654	3.501177	203470
ENSG00000087088	18.242125	45140000
ENSG00000156515	134.27475	177450000
ENSG00000171552	54.405966	19941000
ENSG00000127947	12.80025	3754000
ENSG00000186298	77.329628	12182000
ENSG00000121022	32.086225	25893000
ENSG00000197555	8.122694	1084400
ENSG00000074696	58.6516	73165000
ENSG00000086758	32.150023	86133000
ENSG00000101849	10.63275	6941900
ENSG00000172936	0.507067	1065300
ENSG00000117335	15.83305	975700
ENSG00000105974	150.998784	77095000
ENSG00000213281	91.232952	37375000
ENSG00000133703	23.939448	8148400
ENSG00000132646	2322.985	760370000
ENSG00000164305	9.407931	7968700
ENSG00000106144	3.631367	1437300

B.3_U2OS_transcriptome_vs_proteome.pdf

Ensemble	Transcriptome	Proteome
ENSG00000132323	8.316267	35200000
ENSG00000198793	4.75468	5059000
ENSG00000069869	7.349775	4418000
ENSG00000116062	44.19215	137730000
ENSG00000051180	5.165412	957470
ENSG00000078902	5.701679	9633300
ENSG00000164305	14.14011	7968700
ENSG00000175793	86.55503	1135300000
ENSG00000129559	16.40551	50558000
ENSG00000177889	7.24841	185580000
ENSG00000181222	2.412641	16334000
ENSG00000127191	10.04018	2156300
ENSG00000177885	20.76125	86104000
ENSG00000119487	18.36217	347260
ENSG00000091409	1.47538	11423000
ENSG00000166851	24.906	7606200
ENSG00000168036	112.6365	45035000
ENSG00000103319	1.257597	367430
ENSG00000166913	115.3521	833790000
ENSG00000023734	46.33097	226290000
ENSG00000156709	4.47478	32168000
ENSG00000106070	6.545395	1123000
ENSG00000126583	0.372495	79227
ENSG00000141564	4.248701	298340
ENSG00000117450	138.2554	2279200000
ENSG00000109320	9.614555	1867100
ENSG00000075426	48.92325	2189000
ENSG00000164924	5.468613	1247300000
ENSG00000148082	0.120082	0
ENSG00000137154	143.4008	463170000
ENSG00000013364	42.10006	110970000
ENSG00000134057	113.7807	29894000
ENSG00000100393	3.005673	418920
ENSG00000123496	0.675524	2394200
ENSG00000055130	4.152576	9325400
ENSG00000171552	35.60932	19941000
ENSG00000072501	6.392488	60239000
ENSG00000185634	0.14163	339880
ENSG00000070831	17.35758	95660000
ENSG00000164733	86.43782	206680000
ENSG00000145675	2.209013	4028100
ENSG00000111679	0	17905000
ENSG00000102144	52.94012	1289200000
ENSG00000085511	6.545148	476310
ENSG00000213281	42.15589	37375000
ENSG00000067225	354.9655	3576500000
ENSG00000092820	28.48086	628500000
ENSG00000105976	13.58255	442400
ENSG00000105974	18.13789	77095000
ENSG00000025039	2.318028	3699100
ENSG00000064012	12.30428	2076300

ENSG00000186298	62.50496	12182000
ENSG00000138794	3.928307	5819300
ENSG00000082701	17.97938	11871000
ENSG00000143776	4.654249	224920
ENSG00000168214	7.499059	361600
ENSG00000165119	18.71478	1323100000
ENSG00000088832	15.32913	90199000
ENSG00000107099	0.423954	423490
ENSG00000087088	78.95739	45140000
ENSG00000087586	25.30445	2712000
ENSG00000002330	6.940266	1539500
ENSG00000065559	5.359875	3416000
ENSG00000151247	0.637908	59651000
ENSG00000175354	5.686227	7314800
ENSG00000153707	0	758580
ENSG00000196396	10.53494	67542000
ENSG00000113558	7.689995	31288000
ENSG00000013374	4.65765	158170
ENSG00000149554	1.004861	2901800
ENSG00000078747	3.360874	6857300
ENSG00000159399	1.512773	13216000
ENSG00000111640	207.417	4505900000
ENSG00000113721	3.672378	1183500
ENSG00000145715	9.062988	1911000
ENSG00000117335	23.93037	975700
ENSG00000047410	3.145846	140190000
ENSG00000172936	0.736668	1065300
ENSG00000109332	14.22078	23490000
ENSG00000075415	98.19991	158020000
ENSG00000114030	6.122649	56254000
ENSG00000118260	14.72904	4638600
ENSG00000167193	26.26761	17671000
ENSG00000136167	0.325285	8453900
ENSG00000172115	5.715238	117680000
ENSG00000146072	1.411154	1221500
ENSG00000174775	8.927459	8148400
ENSG00000120899	0.862131	6050200
ENSG00000136238	83.01474	270010000
ENSG00000117748	11.21766	19520000
ENSG00000179295	3.517361	32914000
ENSG00000168610	2.269444	37469000
ENSG00000172216	39.83249	643650
ENSG00000154229	19.98183	11318000
ENSG00000102580	7.057802	11909000
ENSG00000177425	5.978265	2508500
ENSG00000158092	7.187106	1705300
ENSG00000165025	0	0
ENSG00000166333	66.24091	78186000
ENSG00000145191	21.55919	28807000
ENSG00000169564	22.39674	353770000
ENSG00000175054	2.938338	345560
ENSG00000132646	77.91315	760370000

ENSG00000140044	2.109028	522440
ENSG00000096717	11.11115	1629800
ENSG00000123374	37.99207	42627000
ENSG00000172845	33.19147	238110
ENSG00000183735	9.278013	1852400
ENSG00000142627	26.05005	79408000
ENSG00000179222	37.14745	709620
ENSG00000133895	5.581327	1389700
ENSG00000141510	9.380247	1239800
ENSG00000196712	17.46522	2398800
ENSG00000111057	4.548688	1400000000
ENSG00000121691	23.33385	9014700
ENSG00000117632	139.3214	399520000
ENSG00000186575	105.8275	12243000
ENSG00000140464	1.157954	12729000
ENSG00000106144	5.534952	1437300
ENSG00000135333	0	138360
ENSG00000132341	112.793	1221800000
ENSG00000169047	12.62161	201240
ENSG00000132109	4.051676	2928800
ENSG00000074696	27.90289	73165000
ENSG00000127947	10.33293	3754000
ENSG00000127946	7.199477	176380
ENSG00000117394	13.50593	30762000
ENSG00000166888	9.424799	1598200
ENSG00000162434	11.25272	380800
ENSG00000144840	0.420095	1833600
ENSG00000155876	31.39155	3505200
ENSG00000158402	5.407933	463240
ENSG00000170558	22.09195	17441000
ENSG00000072062	11.04986	20549000
ENSG00000085733	25.59802	311020000
ENSG00000186654	5.292362	203470
ENSG00000147065	48.02741	1402900000
ENSG00000170312	80.93061	365420000
ENSG00000105329	2.185303	987990
ENSG00000051382	2.175843	301410
ENSG00000101849	8.354592	6941900
ENSG00000177606	62.73149	3452400
ENSG00000151748	11.30182	1640500
ENSG00000150593	6.452852	1818100
ENSG00000135341	8.377849	88570
ENSG00000086758	15.04536	86133000
ENSG00000012983	2.357655	2354100
ENSG00000145604	10.12676	1545000
ENSG00000143727	21.17793	42163000
ENSG00000085832	8.552567	9707700
ENSG00000198742	7.935854	47716
ENSG00000167136	2.238743	160240
ENSG00000106608	3.086369	241660
ENSG00000066044	10.09995	150330000
ENSG00000116030	1.354842	16792000

ENSG00000077150	13.20437	6458300
ENSG00000187678	0.131009	42085
ENSG00000135932	9.945889	24198000
ENSG00000197122	4.43005	1178200
ENSG00000109971	76.435	5200000000
ENSG00000063046	7.065881	88541000
ENSG00000026103	7.70067	739190
ENSG00000103653	11.36703	23487000
ENSG00000112210	7.335928	8296900
ENSG00000116954	6.512245	3699100
ENSG00000089159	3.578642	8703300
ENSG00000101346	13.53863	38950000
ENSG00000197905	19.96321	1477400
ENSG00000108854	5.485251	1037100
ENSG00000138448	36.73971	26330000
ENSG00000148773	6.154681	154620000
ENSG00000164171	6.486296	32054000
ENSG00000132155	25.18851	231520
ENSG00000204673	5.408439	6394400
ENSG00000100387	51.43718	5432200
ENSG00000184047	12.23834	16836000
ENSG00000106615	3.595491	12485000
ENSG00000110092	69.07291	458280
ENSG00000132470	3.768884	6065000
ENSG00000198561	30.92754	62058000
ENSG00000180370	5.010641	45223000
ENSG00000130396	1.925	5868700
ENSG00000123268	17.58017	4638600
ENSG00000168040	19.61852	4913900
ENSG00000167658	367.5808	2203600000
ENSG00000160741	1.850865	374750
ENSG00000080839	6.919663	100740
ENSG00000132142	7.831329	26514000
ENSG00000121022	25.70099	25893000
ENSG00000137275	7.027526	13523000
ENSG00000170581	9.114779	1764900
ENSG00000169398	6.489583	15009000
ENSG00000041982	21.02089	1001300
ENSG00000160691	31.42725	2843500
ENSG00000197081	14.18148	26903000
ENSG00000108443	4.911492	2192400
ENSG00000130669	16.97035	5574500
ENSG00000141959	17.08048	37302000
ENSG00000074800	395.9757	5495500000
ENSG00000144554	13.13608	6975600
ENSG00000114978	28.50995	58666000
ENSG00000108270	5.444691	11706000
ENSG00000015475	1.984714	8439600
ENSG00000095002	46.24018	107010000
ENSG00000139687	9.962004	13983000
ENSG00000055332	11.43857	48213000
ENSG00000153071	6.792776	3263800

ENSG00000039068	0.300494	326560
ENSG00000205155	20.67509	430260
ENSG00000166508	85.67788	260850000
ENSG00000146648	13.19172	95415000
ENSG00000156515	16.77913	177450000
ENSG00000078061	20.84491	5092600
ENSG00000145386	41.90757	1139300
ENSG00000137693	15.70347	10365000
ENSG00000149269	17.39761	10188000
ENSG00000044524	0.58551	1594600
ENSG00000147403	4.35468	238200000
ENSG00000100614	15.02925	38902000
ENSG00000112062	13.74528	8017700
ENSG00000126767	9.142842	32410
ENSG00000162736	27.93567	19243000
ENSG00000049759	3.481453	4249600
ENSG00000115414	18.07903	558490
ENSG00000115415	16.00266	180030000
ENSG00000005339	2.239601	1417800
ENSG00000083750	4.722153	3505200
ENSG00000067560	80.02579	245470000
ENSG00000174791	4.705169	6218900
ENSG00000159692	26.37915	20337000
ENSG00000076555	0.490161	1364100
ENSG00000165806	9.560012	3408600
ENSG00000092969	25.09862	6414800
ENSG00000221978	27.0753	114720
ENSG00000139926	59.30302	1192600
ENSG00000114867	94.21308	353060000
ENSG00000117362	21.70105	153460
ENSG00000126456	12.72869	1166900
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ENSG00000100324	12.65696	667650
ENSG00000126458	14.46083	5390200
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ENSG00000171223	20.92801	70869
ENSG00000143499	25.04651	2047900
ENSG00000187840	88.0346	0
ENSG00000133818	3.378727	40435000
ENSG00000110395	3.280397	1440800
ENSG00000133703	11.22254	8148400
ENSG00000115317	13.43365	1157500
ENSG00000106211	99.11533	2053600000
ENSG00000184216	52.41841	2474900
ENSG00000099942	9.583883	30946000
ENSG00000123836	6.344897	3735000
ENSG00000197555	12.47549	1084400
ENSG00000173039	11.53344	11165000
ENSG00000164951	9.031149	563600
ENSG00000141551	25.84009	5613700
ENSG00000071051	29.60155	6658400
ENSG00000135318	1.253827	6046500

ENSG00000141646	5.347253	2230100
ENSG00000102871	3.31102	1506300

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Ensemble	Simulation Data	Experimental Data
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ENSG00000116954	7.701685	2273800
ENSG00000145715	19.16348	7399100
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ENSG00000153707	0	330450
ENSG00000137154	22161.61175	254620000
ENSG00000196396	113.53075	46871000
ENSG00000165119	872.268	656030000
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ENSG00000167136	3.57447	153050
ENSG00000085733	5785.4875	104870000
ENSG00000181222	3.552498	9835200
ENSG00000164733	361.377531	103630000
ENSG00000127191	6.329965	1152200
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ENSG00000151748	14.487208	186110
ENSG00000115317	5.951429	1109000
ENSG00000132155	10.065919	251170
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ENSG00000076555	0.239676	565300
ENSG00000169564	547.56175	130740000
ENSG00000150593	10.639918	611900
ENSG00000111057	515.198	252620000
ENSG00000080839	1.40073	39670
ENSG00000117394	173.89425	74487000
ENSG00000145675	5.526886	1710600
ENSG00000198742	5.958788	9696
ENSG00000108854	5.054797	1529100
ENSG00000144554	4.772143	2262200
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ENSG00000168040	85.584221	2146500
ENSG00000186575	32.610308	5836400
ENSG00000149269	8.144462	1671900
ENSG00000139687	4.9421	12478000
ENSG00000177889	66.477025	95412000
ENSG00000168214	10.817109	667670
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ENSG00000184047	6.885802	9805100

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ENSG00000132109	5.128758	1810000
ENSG00000123836	4.80152	944230
ENSG00000168610	26.431185	25993000
ENSG00000113721	0	829940
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ENSG00000166333	130.69559	40867000
ENSG00000156709	21.381543	35987000
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ENSG00000168036	14.71534	26726000
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ENSG00000146072	22.546078	1162400
ENSG00000172115	128.576396	138980000
ENSG00000070831	175.246138	57690000
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ENSG00000132323	9.758608	12832000
ENSG00000180370	160.481588	47428000
ENSG00000115415	321.076607	49639000
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ENSG00000130669	11.902995	2382300
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ENSG00000066044	87.652475	96318000
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ENSG00000072062	23.350935	22081000
ENSG00000165025	1.857683	39796
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ENSG00000109332	43.360604	12112000

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ENSG00000110395	2.201307	666990
ENSG00000187840	41.659651	0
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ENSG00000067560	1785.616025	158080000
ENSG00000075415	966.992	86125000
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ENSG00000075426	7.715813	845540
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ENSG00000143727	49.788558	20301000
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ENSG00000126456	10.048427	820140
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ENSG00000142627	259.916215	95438000
ENSG00000119487	14.976672	187510
ENSG00000067225	5026.775	3711500000
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ENSG00000013374	17.95135	1164800
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ENSG00000108270	7.207808	4460300
ENSG00000159692	10.017412	16369000
ENSG00000205155	24.688277	295010
ENSG00000102580	24.335992	8251600
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ENSG00000167193	13.727515	17055000
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ENSG00000162736	49.396278	8488700
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ENSG00000169047	1.425871	31477
ENSG00000145191	29.324745	10676000
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ENSG00000101346	43.8885	18481000
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ENSG00000221978	19.13351	53806
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ENSG00000047410	29.851875	71980000
ENSG00000164951	12.67315	335920
ENSG00000044524	0	3265400
ENSG00000164171	25.682145	22032000
ENSG00000186654	16.664072	0
ENSG00000087088	26.857075	8350600
ENSG00000156515	160.17375	95155000
ENSG00000171552	181.454778	7977100
ENSG00000127947	9.483923	5692600
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ENSG00000121022	32.109775	9630500
ENSG00000197555	4.086009	295440
ENSG00000074696	13.728627	28561000
ENSG00000086758	62.07585	39289000
ENSG00000101849	0.141414	5218800
ENSG00000172936	0.653273	914860
ENSG00000117335	63.1185	1172100
ENSG00000105974	859.098521	75979000
ENSG00000213281	83.853898	21236000
ENSG00000133703	16.348301	11834000
ENSG00000132646	2710.755	388590000
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Ensemble	Transcriptome	Proteome
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ENSG00000116062	16.66552	45871000
ENSG00000196419	12.57752	285640000
ENSG00000051180	4.054801	486390
ENSG00000078902	6.704341	4541800
ENSG00000164305	12.78772	7972300
ENSG00000175793	2.454353	101160000
ENSG00000129559	14.23917	21858000
ENSG00000177889	7.810938	95412000
ENSG00000181222	7.097494	9835200
ENSG00000127191	10.84233	1152200
ENSG00000177885	22.29665	39470000
ENSG00000119487	32.86382	187510
ENSG00000091409	5.631455	7396300
ENSG00000166851	14.45831	5070400
ENSG00000168036	165.0769	26726000
ENSG00000103319	2.229845	188980
ENSG00000166913	60.35994	262380000
ENSG00000023734	60.50881	128840000
ENSG00000156709	12.66111	35987000
ENSG00000106070	12.16326	576480
ENSG00000126583	0.338703	39220
ENSG00000141564	4.574108	207540
ENSG00000117450	211.8925	1247700000
ENSG00000109320	9.343376	1034400
ENSG00000075426	14.96235	845540
ENSG00000164924	4.094694	517560000
ENSG00000148082	0.615966	0
ENSG00000137154	246.9526	254620000
ENSG00000013364	35.87124	66711000
ENSG00000134057	62.33923	12182000
ENSG00000100393	2.853933	115810
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ENSG00000055130	6.35625	15255000
ENSG00000171552	34.22792	7977100
ENSG00000072501	3.886894	30802000
ENSG00000185634	0.418576	478080
ENSG00000070831	11.14704	57690000
ENSG00000164733	83.17745	103630000
ENSG00000145675	3.984303	1710600
ENSG00000111679	0.120983	10586000
ENSG00000102144	44.28649	495040000
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ENSG00000213281	33.8192	21236000
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ENSG00000148773	5.863628	98428000
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ENSG00000132155	21.39676	251170
ENSG00000204673	8.199916	2574700
ENSG00000100387	36.6033	3354500
ENSG00000184047	5.728709	9805100
ENSG00000106615	7.253792	25809000
ENSG00000110092	248.1138	281940
ENSG00000132470	6.463457	4225600
ENSG00000198561	21.11222	34103000
ENSG00000180370	17.29241	47428000
ENSG00000130396	14.34461	3086600
ENSG00000123268	10.51209	1559200
ENSG00000168040	17.83876	2146500
ENSG00000167658	585.8859	1755700000
ENSG00000160741	2.189544	326880
ENSG00000080839	3.52327	39670
ENSG00000132142	13.70047	13130000
ENSG00000121022	6.323611	9630500
ENSG00000137275	5.674322	6752400
ENSG00000170581	7.202907	256240
ENSG00000169398	11.77027	8494500
ENSG00000041982	99.59356	1501600
ENSG00000160691	1.998611	1651300
ENSG00000197081	25.55674	21457000
ENSG00000108443	2.55196	4597000
ENSG00000130669	15.16143	2382300
ENSG00000141959	6.015077	14058000
ENSG00000074800	405.1917	2658100000
ENSG00000144554	7.136953	2262200
ENSG00000114978	21.92439	33041000
ENSG00000108270	9.505456	4460300
ENSG00000015475	4.293856	5840700
ENSG00000095002	33.24918	46757000
ENSG00000139687	14.56428	12478000
ENSG00000055332	4.665972	26091000
ENSG00000153071	3.779679	936490
ENSG00000039068	0.546467	2124100

ENSG00000205155	23.26038	295010
ENSG00000166508	55.48857	97835000
ENSG00000146648	29.3693	117420000
ENSG00000156515	27.84584	95155000
ENSG00000078061	14.07702	5416300
ENSG00000145386	17.95442	373170
ENSG00000137693	13.20987	6985900
ENSG00000149269	9.269137	1671900
ENSG00000044524	27.25853	3265400
ENSG00000147403	3.305371	143610000
ENSG00000100614	7.460233	10584000
ENSG00000112062	18.35136	7425300
ENSG00000162736	45.52804	8488700
ENSG00000049759	8.75652	3347600
ENSG00000115414	20.50672	874310
ENSG00000115415	9.489926	49639000
ENSG00000005339	1.226013	221280
ENSG00000083750	2.596232	2510100
ENSG00000067560	66.16419	158080000
ENSG00000174791	1.048342	806820
ENSG00000159692	40.79122	16369000
ENSG00000076555	0.343721	565300
ENSG00000165806	1.058333	1351000
ENSG00000092969	13.03511	1512100
ENSG00000221978	26.92814	53806
ENSG00000139926	40.49613	462250
ENSG00000114867	155.0603	252110000
ENSG00000117362	27.41632	65421
ENSG00000126456	9.241721	820140
ENSG00000150093	92.36793	130010000
ENSG00000100324	5.39267	195190
ENSG00000126458	5.173366	1582400
ENSG00000161638	6.982991	2819200
ENSG00000171223	16.46107	139200
ENSG00000143499	16.67082	454080
ENSG00000187840	94.42226	0
ENSG00000133818	4.246885	14255000
ENSG00000110395	5.153835	666990
ENSG00000133703	8.36365	11834000
ENSG00000115317	21.18925	1109000
ENSG00000106211	52.12038	604860000
ENSG00000184216	114.3834	1561200
ENSG00000099942	5.33213	7862700
ENSG00000123836	3.032138	944230
ENSG00000197555	4.887082	295440
ENSG00000173039	9.743961	6529100
ENSG00000164951	18.72143	335920
ENSG00000141551	6.33125	2810700
ENSG00000071051	16.13726	2057000
ENSG00000135318	110.6776	87758000
ENSG00000141646	7.780747	1723300
ENSG00000102871	5.017751	1007600

B.6_U251MG_match.pdf

Ensemble	Simulation Data	Experimental Data
ENSG00000172845	15.550752	89900
ENSG00000078902	8.432395	10946000
ENSG00000116954	10.220347	3691700
ENSG00000145715	25.270105	1692700
ENSG00000144840	1.426105	2725700
ENSG00000153707	0.156229	765860
ENSG00000137154	17893.399	417570000
ENSG00000196396	104.403	58489000
ENSG00000165119	499.80742	1170000000
ENSG00000169398	15.415513	6589900
ENSG00000167136	7.163749	712690
ENSG00000085733	872.356781	1059100000
ENSG00000181222	9.001936	17564000
ENSG00000164733	674.042837	111610000
ENSG00000127191	7.303454	1437700
ENSG00000141564	3.013475	914920
ENSG00000136238	1975.851606	236050000
ENSG00000100324	3.568514	250970
ENSG00000151748	2.886507	2556600
ENSG00000115317	13.935082	940500
ENSG00000132155	14.532612	344520
ENSG00000134057	323.10885	11289000
ENSG00000076555	0.230569	962190
ENSG00000169564	572.3923	265760000
ENSG00000150593	2.79948	28106000
ENSG00000111057	22.49785	6890000000
ENSG00000080839	0.187229	64541
ENSG00000117394	303.7855	50587000
ENSG00000140044	6.074667	23681
ENSG00000145675	6.534618	2464300
ENSG00000198742	4.88977	0
ENSG00000108854	8.800768	1411400
ENSG00000144554	4.763297	3284300
ENSG00000147403	98.378725	219940000
ENSG00000049759	5.786294	3172000
ENSG00000109971	3470.781202	4086200000
ENSG00000002330	15.884648	2845800
ENSG00000168040	11.797308	23992000
ENSG00000186575	37.661058	6973300
ENSG00000149269	6.16971	3987200
ENSG00000139687	1.081433	9900500
ENSG00000177889	63.586675	195950000
ENSG00000168214	9.497663	290260
ENSG00000164924	118.466475	1788700000
ENSG00000173039	11.798779	8334300
ENSG00000162434	8.387031	572050
ENSG00000121691	8.22946	13018000
ENSG00000096717	10.007442	766550
ENSG00000132470	4.347873	54878000
ENSG00000145386	0.994091	720370
ENSG00000127946	3.198922	181250

ENSG00000184047	7.231839	15417000
ENSG00000135932	39.571907	91187000
ENSG00000132109	1.850101	3288500
ENSG00000123836	1.999224	7858800
ENSG00000168610	19.821371	37181000
ENSG00000113721	0.892018	139510
ENSG00000175354	1.899975	2564200
ENSG00000063046	11.105811	76654000
ENSG00000110092	5003.24665	1185600
ENSG00000175054	4.9368	1338500
ENSG00000095002	8.97149	102140000
ENSG00000137275	6.959945	12288000
ENSG00000196712	0.948399	1837400
ENSG00000141551	4.268219	3123100
ENSG00000085832	14.9074	14556000
ENSG00000177885	47.187488	41414000
ENSG00000117632	483.89285	286430000
ENSG00000107099	0	646160
ENSG00000172216	30.914399	379480
ENSG00000167658	17270.21125	2670000000
ENSG00000155876	25.419632	4000800
ENSG00000103653	31.286582	18940000
ENSG00000051180	2.664153	855070
ENSG00000161638	4.649308	3802700
ENSG00000187678	6.184478	107060
ENSG00000100614	9.347058	55602000
ENSG00000064012	1.962381	800480
ENSG00000123374	37.844422	24293000
ENSG00000145604	3.463009	578210
ENSG00000135333	0	112120
ENSG00000077150	2.372663	8012500
ENSG00000111679	0.308878	20527000
ENSG00000105329	0.941423	724030
ENSG00000140464	11.062232	23476000
ENSG00000160741	1.437219	473460
ENSG00000146648	2157.038735	3139700000
ENSG00000100393	1.917305	1151900
ENSG00000111640	5339.2575	3339200000
ENSG00000103319	3.728105	760200
ENSG00000078747	2.904432	6276600
ENSG00000166333	83.06095	42658000
ENSG00000156709	27.214118	37163000
ENSG00000041982	65.35315	769190
ENSG00000115414	0.149296	3507200
ENSG00000117450	6182.504118	1384200000
ENSG00000100387	24.416307	5828700
ENSG00000168036	282.266598	70655000
ENSG00000133818	9.129976	27997000
ENSG00000141959	12.917975	58307000
ENSG00000143499	11.1335	1822300
ENSG00000151247	4.064686	46093000
ENSG00000166851	9.78123	6992500

ENSG00000065559	4.268147	3212400
ENSG00000150093	2726.318073	254850000
ENSG00000170581	4.837418	1637900
ENSG00000106211	1485.4886	1403800000
ENSG00000108443	4.288717	3846400
ENSG00000088832	153.27925	260540000
ENSG00000139926	27.0177	893190
ENSG00000197122	7.432807	1963500
ENSG00000141510	9.371341	10015000
ENSG00000083750	1.718457	4000800
ENSG00000082701	13.03489	9927300
ENSG00000123268	6.837759	5056500
ENSG00000015475	5.320614	17609000
ENSG00000175793	32.7622	1160900000
ENSG00000166913	1782.8605	468070000
ENSG00000106615	15.224423	25809000
ENSG00000026103	0.38201	627040
ENSG00000143776	10.28394	318280
ENSG00000012983	1.420725	1945200
ENSG00000146072	2.72621	2161000
ENSG00000172115	239.01909	189200000
ENSG00000070831	90.285526	93143000
ENSG00000158092	6.114006	4073600
ENSG00000118260	9.729441	5056500
ENSG00000116030	2.745955	18310000
ENSG00000132323	15.755567	29344000
ENSG00000180370	137.642217	135670000
ENSG00000115415	214.1035	103840000
ENSG00000166888	0.186469	2728900
ENSG00000005339	0.816781	343550
ENSG00000149554	0.337368	2266000
ENSG00000109320	14.314196	2518700
ENSG00000148773	47.939275	124230000
ENSG00000130669	10.178788	4947800
ENSG00000013364	300.32975	66981000
ENSG00000184216	77.527078	4408800
ENSG00000091409	7.042767	22792000
ENSG00000069869	11.43145	2470600
ENSG00000137693	16.643138	6515500
ENSG00000165806	0.697934	2990100
ENSG00000138794	2.517312	6215900
ENSG00000116062	135.1305	119270000
ENSG00000177425	0.658668	7843200
ENSG00000179295	46.192579	22317000
ENSG00000066044	11.898725	154680000
ENSG00000105976	42.656173	1698200
ENSG00000114978	46.93957	33916000
ENSG00000126583	0.221689	172930
ENSG00000072062	19.542275	27189000
ENSG00000165025	0	685690
ENSG00000072501	8.152519	49590000
ENSG00000170312	1297.1851	248700000

ENSG00000109332	44.602135	19721000
ENSG00000114867	4547.236595	445060000
ENSG00000154229	9.323733	2596200
ENSG00000132341	2173.945	794750000
ENSG00000074800	11901.275	4587700000
ENSG00000113558	29.675282	33615000
ENSG00000166508	442.711	245850000
ENSG00000132142	29.334763	27259000
ENSG00000117748	12.79026	10602000
ENSG00000174791	0.69641	1268100
ENSG00000110395	3.512276	674650
ENSG00000187840	63.347467	0
ENSG00000023734	1785.837602	181580000
ENSG00000067560	1876.74145	212700000
ENSG00000075415	1036.4625	110970000
ENSG00000030110	0.413542	211740
ENSG00000071051	10.587901	3495400
ENSG00000183735	7.767241	1799600
ENSG00000197905	2.124925	338630
ENSG00000075426	9.971913	893390
ENSG00000204673	5.466345	5974900
ENSG00000129559	30.7193	36513000
ENSG00000143727	68.3193	19638000
ENSG00000112210	14.790125	5035700
ENSG00000126456	6.233048	2768300
ENSG00000170558	76.4059	1564800
ENSG00000133895	2.857358	927130
ENSG00000142627	577.873495	38395000
ENSG00000119487	22.178457	656840
ENSG00000067225	17265.85	2812300000
ENSG00000092969	14.52896	1230500
ENSG00000013374	11.739375	2939700
ENSG00000025039	2.190456	3691700
ENSG00000171223	1.299993	299310
ENSG00000147065	1319.7125	1084600000
ENSG00000108270	11.954867	4394700
ENSG00000159692	12.404588	16930000
ENSG00000205155	15.56879	518630
ENSG00000102580	17.698652	24487000
ENSG00000197081	54.16635	15466000
ENSG00000055332	10.201493	43768000
ENSG00000126458	3.458418	4345000
ENSG00000135318	905.8545	16912000
ENSG00000102144	1276.3625	1784400000
ENSG00000099942	6.648843	15903000
ENSG00000167193	84.305615	14044000
ENSG00000117362	18.132015	176050
ENSG00000162736	56.857515	15176000
ENSG00000120899	0.573581	9218600
ENSG00000114030	12.3023	58646000
ENSG00000169047	3.244162	23717
ENSG00000145191	32.99615	21781000

ENSG00000136167	0.140965	3701400
ENSG00000159399	10.63305	31456000
ENSG00000106608	3.808857	346970
ENSG00000102871	3.35538	1388600
ENSG00000130396	9.562397	4502200
ENSG00000177606	2.678425	2078500
ENSG00000078061	17.575663	4468100
ENSG00000055130	0.102149	28640000
ENSG00000092820	28.583793	880890000
ENSG00000135341	10.982629	1038400
ENSG00000101346	38.0156	22801000
ENSG00000198793	3.806613	3801800
ENSG00000126767	2.948199	23613
ENSG00000198561	45.545804	139670000
ENSG00000174775	14.280961	7381900
ENSG00000085511	8.957643	193930
ENSG00000158402	3.039225	535740
ENSG00000039068	0.36615	7595300
ENSG00000160691	2.215204	2012600
ENSG00000138448	57.72755	23667000
ENSG00000089159	16.284735	16287000
ENSG00000087586	7.746195	1183800
ENSG00000123496	123.681475	1882400
ENSG00000196419	369.8313	448170000
ENSG00000106070	8.063796	574910
ENSG00000141646	5.171483	2367100
ENSG00000221978	17.85704	52229
ENSG00000112062	23.01675	9249900
ENSG00000153071	2.534211	64942
ENSG00000047410	45.90675	92112000
ENSG00000164951	12.701425	433000
ENSG00000044524	18.048095	1693700
ENSG00000164171	10.938752	154180000
ENSG00000186654	0.137301	444560
ENSG00000087088	2.461345	19776000
ENSG00000156515	223.2685	138710000
ENSG00000171552	55.273233	24203000
ENSG00000127947	16.7667	2417800
ENSG00000186298	59.12325	10864000
ENSG00000121022	7.894662	16582000
ENSG00000197555	3.18194	565720
ENSG00000074696	48.747735	43519000
ENSG00000086758	30.963566	116440000
ENSG00000101849	5.14509	13828000
ENSG00000172936	2.223705	2110800
ENSG00000117335	35.27305	2176200
ENSG00000105974	349.456053	130480000
ENSG00000213281	73.294632	29288000
ENSG00000133703	17.830359	7381900
ENSG00000132646	1660.99	995680000
ENSG00000164305	10.871582	6977400
ENSG00000106144	5.76154	2161500

B.7_U251MG_transcriptome_vs_proteome.pdf

Ensemble	Transcriptome	Proteome
ENSG00000132323	4.608697	29344000
ENSG00000198793	3.570039	3801800
ENSG00000069869	7.168816	2470600
ENSG00000116062	35.24469	119270000
ENSG00000196419	14.52397	448170000
ENSG00000051180	4.293295	855070
ENSG00000078902	9.495172	10946000
ENSG00000164305	12.36872	6977400
ENSG00000175793	218.0718	1160900000
ENSG00000129559	8.520502	36513000
ENSG00000177889	8.165987	195950000
ENSG00000181222	2.800935	17564000
ENSG00000127191	9.397137	1437700
ENSG00000177885	25.13142	41414000
ENSG00000119487	22.19228	656840
ENSG00000091409	7.370355	22792000
ENSG00000166851	26.56072	6992500
ENSG00000168036	106.8793	70655000
ENSG00000103319	3.875394	760200
ENSG00000166913	61.72831	468070000
ENSG00000023734	34.43323	181580000
ENSG00000156709	9.947566	37163000
ENSG00000106070	0	574910
ENSG00000126583	0.15477	172930
ENSG00000141564	3.342326	914920
ENSG00000117450	151.6557	1384200000
ENSG00000109320	8.197656	2518700
ENSG00000075426	11.57718	893390
ENSG00000164924	10.71773	1788700000
ENSG00000148082	0.249468	86435
ENSG00000137154	305.8598	417570000
ENSG00000013364	69.87448	66981000
ENSG00000134057	83.19957	11289000
ENSG00000100393	2.394534	1151900
ENSG00000123496	0.116949	1882400
ENSG00000055130	16.83085	28640000
ENSG00000171552	79.77235	24203000
ENSG00000072501	7.513606	49590000
ENSG00000185634	0	348910
ENSG00000070831	21.63662	93143000
ENSG00000164733	44.59431	111610000
ENSG00000145675	1.278948	2464300
ENSG00000111679	3.597276	20527000
ENSG00000102144	96.78389	1784400000
ENSG00000085511	2.884291	193930
ENSG00000213281	38.7064	29288000
ENSG00000067225	172.5056	2812300000
ENSG00000092820	150.097	880890000
ENSG00000105976	159.5235	1698200
ENSG00000105974	86.43558	130480000
ENSG00000025039	0	3691700

ENSG00000064012	11.68962	800480
ENSG00000186298	72.66016	10864000
ENSG00000138794	4.862032	6215900
ENSG00000082701	18.95253	9927300
ENSG00000143776	5.377044	318280
ENSG00000168214	16.29728	290260
ENSG00000165119	29.72157	1170000000
ENSG00000088832	28.02155	260540000
ENSG00000107099	0	646160
ENSG00000087088	39.50837	19776000
ENSG00000087586	16.17154	1183800
ENSG00000002330	19.33923	2845800
ENSG00000065559	8.604318	3212400
ENSG00000151247	0.852823	46093000
ENSG00000175354	3.432309	2564200
ENSG00000153707	0	765860
ENSG00000196396	13.95844	58489000
ENSG00000113558	10.71034	33615000
ENSG00000013374	26.53137	2939700
ENSG00000149554	11.63792	2266000
ENSG00000078747	7.892839	6276600
ENSG00000159399	6.808373	31456000
ENSG00000111640	162.9746	3339200000
ENSG00000113721	0	139510
ENSG00000145715	15.04343	1692700
ENSG00000117335	95.39835	2176200
ENSG00000047410	3.69176	92112000
ENSG00000172936	0.940972	2110800
ENSG00000109332	20.34958	19721000
ENSG00000075415	115.8802	110970000
ENSG00000114030	9.627575	58646000
ENSG00000118260	13.20123	5056500
ENSG00000167193	6.419444	14044000
ENSG00000136167	6.354371	3701400
ENSG00000172115	4.454788	189200000
ENSG00000146072	34.24682	2161000
ENSG00000174775	10.03907	7381900
ENSG00000120899	6.624196	9218600
ENSG00000136238	112.5728	236050000
ENSG00000117748	10.76398	10602000
ENSG00000179295	4.508333	22317000
ENSG00000168610	12.71914	37181000
ENSG00000172216	28.54996	379480
ENSG00000154229	6.035392	2596200
ENSG00000102580	19.05823	24487000
ENSG00000177425	20.45109	7843200
ENSG00000158092	19.23318	4073600
ENSG00000165025	2.772823	685690
ENSG00000166333	60.93478	42658000
ENSG00000145191	23.32645	21781000
ENSG00000169564	19.01766	265760000
ENSG00000175054	7.652004	1338500

ENSG00000132646	78.1785	995680000
ENSG00000140044	8.187374	23681
ENSG00000096717	7.162453	766550
ENSG00000123374	26.2327	24293000
ENSG00000172845	23.45524	89900
ENSG00000183735	9.102002	1799600
ENSG00000142627	21.09316	38395000
ENSG00000133895	4.530775	927130
ENSG00000141510	14.05191	10015000
ENSG00000196712	20.33843	1837400
ENSG00000111057	17.36498	6890000000
ENSG00000121691	34.99829	13018000
ENSG00000117632	156.9571	286430000
ENSG00000186575	48.50701	6973300
ENSG00000140464	4.149751	23476000
ENSG00000106144	11.73338	2161500
ENSG00000135333	0	112120
ENSG00000132341	65.01297	794750000
ENSG00000169047	2.143511	23717
ENSG00000132109	7.737069	3288500
ENSG00000074696	6.53125	43519000
ENSG00000127947	7.655842	2417800
ENSG00000127946	4.29597	181250
ENSG00000117394	20.98969	50587000
ENSG00000166888	15.48466	2728900
ENSG00000162434	17.78841	572050
ENSG00000144840	2.493533	2725700
ENSG00000155876	45.33724	4000800
ENSG00000158402	6.468543	535740
ENSG00000170558	0.443434	1564800
ENSG00000072062	10.99585	27189000
ENSG00000085733	199.6165	1059100000
ENSG00000186654	25.18933	444560
ENSG00000147065	48.83072	1084600000
ENSG00000170312	65.92162	248700000
ENSG00000105329	2.476314	724030
ENSG00000051382	12.05402	488860
ENSG00000101849	0.111115	13828000
ENSG00000177606	167.1556	2078500
ENSG00000151748	21.40284	2556600
ENSG00000150593	16.01649	28106000
ENSG00000135341	9.799343	1038400
ENSG00000086758	29.04986	116440000
ENSG00000012983	3.228205	1945200
ENSG00000145604	7.57724	578210
ENSG00000143727	22.91984	19638000
ENSG00000085832	13.88805	14556000
ENSG00000198742	9.039634	0
ENSG00000167136	5.355615	712690
ENSG00000106608	5.210028	346970
ENSG00000066044	10.63033	154680000
ENSG00000116030	1.564407	18310000

ENSG00000077150	18.56019	8012500
ENSG00000187678	0.8165	107060
ENSG00000135932	45.77752	91187000
ENSG00000197122	9.312583	1963500
ENSG00000109971	61.12067	4086200000
ENSG00000063046	8.269273	76654000
ENSG00000026103	12.11965	627040
ENSG00000103653	15.50614	18940000
ENSG00000112210	5.70358	5035700
ENSG00000116954	11.45701	3691700
ENSG00000089159	9.886122	16287000
ENSG00000101346	20.63571	22801000
ENSG00000197905	7.050283	338630
ENSG00000030110	2.261958	211740
ENSG00000108854	7.555235	1411400
ENSG00000138448	27.43226	23667000
ENSG00000148773	8.015222	124230000
ENSG00000164171	20.26394	154180000
ENSG00000132155	14.82034	344520
ENSG00000204673	3.899535	5974900
ENSG00000100387	62.87668	5828700
ENSG00000184047	5.454596	15417000
ENSG00000106615	9.025692	25809000
ENSG00000110092	133.3737	1185600
ENSG00000132470	79.36238	54878000
ENSG00000198561	85.65963	139670000
ENSG00000180370	20.16179	135670000
ENSG00000130396	16.92674	4502200
ENSG00000123268	12.30644	5056500
ENSG00000168040	129.412	23992000
ENSG00000167658	570.2181	2670000000
ENSG00000160741	2.014113	473460
ENSG00000080839	4.852785	64541
ENSG00000132142	14.81029	27259000
ENSG00000121022	25.71986	16582000
ENSG00000137275	6.190188	12288000
ENSG00000170581	12.29544	1637900
ENSG00000169398	9.110956	6589900
ENSG00000041982	3.121337	769190
ENSG00000160691	17.28311	2012600
ENSG00000197081	11.52173	15466000
ENSG00000108443	3.261307	3846400
ENSG00000130669	17.72966	4947800
ENSG00000141959	23.86721	58307000
ENSG00000074800	291.665	4587700000
ENSG00000144554	7.150204	3284300
ENSG00000114978	20.53345	33916000
ENSG00000108270	5.731009	4394700
ENSG00000015475	10.52124	17609000
ENSG00000095002	35.57031	102140000
ENSG00000139687	9.570117	9900500
ENSG00000055332	15.98169	43768000

ENSG00000153071	0	64942
ENSG00000039068	56.63478	7595300
ENSG00000205155	36.88529	518630
ENSG00000166508	36.35342	245850000
ENSG00000146648	2540.354	3139700000
ENSG00000156515	19.99451	138710000
ENSG00000078061	6.369444	4468100
ENSG00000145386	48.63695	720370
ENSG00000137693	15.73025	6515500
ENSG00000149269	12.23593	3987200
ENSG00000044524	0	1693700
ENSG00000147403	5.607203	219940000
ENSG00000100614	35.8106	55602000
ENSG00000112062	29.72352	9249900
ENSG00000126767	4.710564	23613
ENSG00000162736	39.55356	15176000
ENSG00000049759	4.588441	3172000
ENSG00000115414	1.351955	3507200
ENSG00000115415	13.19128	103840000
ENSG00000005339	0.804052	343550
ENSG00000083750	6.388004	4000800
ENSG00000067560	63.74305	212700000
ENSG00000174791	4.005745	1268100
ENSG00000159692	26.45142	16930000
ENSG00000076555	0.357297	962190
ENSG00000165806	13.49042	2990100
ENSG00000092969	2.818471	1230500
ENSG00000221978	28.85304	52229
ENSG00000139926	34.42633	893190
ENSG00000114867	137.2182	445060000
ENSG00000117362	42.46169	176050
ENSG00000126456	14.89876	2768300
ENSG00000150093	141.6964	254850000
ENSG00000100324	8.614581	250970
ENSG00000126458	30.53449	4345000
ENSG00000161638	7.89522	3802700
ENSG00000171223	79.75301	299310
ENSG00000143499	4.072917	1822300
ENSG00000187840	62.09563	0
ENSG00000133818	5.367235	27997000
ENSG00000110395	3.220562	674650
ENSG00000133703	7.649605	7381900
ENSG00000115317	9.049553	940500
ENSG00000106211	122.3081	1403800000
ENSG00000184216	85.44264	4408800
ENSG00000099942	9.455102	15903000
ENSG00000123836	7.28226	7858800
ENSG00000197555	6.275622	565720
ENSG00000173039	13.59921	8334300
ENSG00000164951	18.67977	433000
ENSG00000141551	19.20136	3123100
ENSG00000071051	10.41726	3495400

ENSG00000135318	19.46989	16912000
ENSG00000141646	9.330235	2367100
ENSG00000102871	14.73977	1388600

B.10_cancer_cell_IDs.pdf

Appendix B.9: The ID of three cancer cell lines:

The applied 60 cancer cell lines from three cancer types (breast, colon, and lung) are provided from cancer research organization of The Cancer Genome Atlas and the data can be downloaded from its link (https://tcga-data.nci.nih.gov).

ID of 20 breast cancer cell lines:

unc.edu__AgilentG4502A_07_3__TCGA-E2-A15J-01A-11R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15K-01A-11R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15K-06A-11R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15L-01A-11R-A12D-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15M-01A-11R-A12D-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15M-11A-22R-A12D-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15O-01A-11R-A115-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15P-01A-11R-A115-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15R-01A-11R-A115-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15S-01A-11R-A115-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A15T-01A-11R-A115-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1AZ-01A-11R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1B0-01A-11R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1B1-01A-21R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1B4-01A-11R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1B5-01A-21R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1B6-01A-31R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1BC-01A-11R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1BC-11A-32R-A12P-07
unc.edu__AgilentG4502A_07_3__TCGA-E2-A1BD-01A-11R-A12P-07

ID of 20 colon cancer cell lines:

unc.edu__AgilentG4502A_07_3__TCGA-AA-A00Z-01A-01R-A002-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A010-01A-01R-A00A-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A017-01A-01R-A00A-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A01C-01A-01R-A00A-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A01D-01A-01R-A00A-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A01F-01A-01R-A002-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A01G-01A-01R-A002-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A01I-01A-02R-A00A-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A01K-01A-01R-A00A-07
unc.edu__AgilentG4502A_07_3__TCGA-AA-A01Q-01A-01R-A002-07
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unc.edu__AgilentG4502A_07_3__TCGA-AA-A02F-01A-01R-A00A-07
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unc.edu__AgilentG4502A_07_3__TCGA-AA-A02W-01A-01R-A00A-07
unc.edu__AgilentG4502A_07_3__TCGA-AY-4070-01A-01R-1113-07
unc.edu__AgilentG4502A_07_3__TCGA-AY-4071-01A-01R-1113-07

ID of 20 lung cancer cell lines:

unc.edu__AgilentG4502A_07_3__TCGA-44-2665-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-44-2666-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-44-2668-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-44-3398-01A-01R-1107-07
unc.edu__AgilentG4502A_07_3__TCGA-44-3918-01A-01R-1107-07
unc.edu__AgilentG4502A_07_3__TCGA-44-3919-01A-02R-1107-07
unc.edu__AgilentG4502A_07_3__TCGA-44-4112-01A-01R-1107-07
unc.edu__AgilentG4502A_07_3__TCGA-55-1592-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-55-1594-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-55-1595-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-55-1596-01A-01R-0946-07
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unc.edu__AgilentG4502A_07_3__TCGA-67-3770-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-67-3771-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-67-3772-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-67-3773-01A-01R-0946-07
unc.edu__AgilentG4502A_07_3__TCGA-67-3774-01A-01R-0946-07

C.2_pathway_keyComponent.pdf

Pathway	Description	Mechanism
MAPK_signaling	A mitogen-activated protein kinase (MAPK) cascade, which composes of diverse protein phosphorylation cascades that function to control different cellular processes related to proliferation, angiogenesis, apoptosis and other.	The activation of this pathway triggers the phosphorylation of protein kinase RAS and its cousin that in turn phosphorylate MEK1/2. Afterwards, ERK1/2 is phosphorylated by MEK1/2 and activates diverse down-stream targets (such as RPS6KA2, TSC2, AR, ESR1, SMAD2/3, EIF4EBP1)
p38MAPK	Functions in a similar way as MAPK_signaling, possesses protein phosphorylation cascades based on protein kinase MAPK14 (p38) and control different cellular processes. This pathway has intensive crosstalk with signaling pathways such as Activin_signaling, TGF_beta.	The phosphorylation of the protein kinase MAPK14 can be triggered by the different activated cellular components (such as MKK3/6, MKK4/7, ACVR:MSTN, ACVR:ACTIVIN, ACVR:GDF11). This activated protein kinase can in turn phosphorylate many target proteins (such as ELK1, ATF2, TP53).
NFkB_signaling	Includes relevant transcriptional regulations of NF-kappa-Bs and has a multitude of functions (initiating inflammatory response and invading pathogenes as a part of an innate immune response).	The activation of diverse signaling pathways leads to phosphorylation of I-kappa-B kinases (IKBKA, IKBKB, IKBKE, IKBKG) that phosphorylate the inhibitors of NF-kappa-Bs to free and activate them. The activated NF-kappa-Bs transcriptional regulate many genes (such as IL2, IL2RA, IL13RA2, IL9, IL13, IL15, CSF2, CSF3, VEGFC)
JAK_STAT	The Janus kinases (JAKs) phosphorylate the signal transducers and activators of transcription (STATs) that convey the messeage from cell-surface into the nucleus.	Diverse ligands (such as IL2, IL4, IL5, IL9, CSF, CSF3, CTF1, IL12A, IL12B, IL6, LIF, OSM and other) bind to their corresponding receptors and phosphorylate different JAKs or combination of them. After the activation of STATs, the activated STATs can be translocated into nucleus to carry the signal information into nucleus by transactivating many target genes (such as SOCS3, CISH, MCL1, PIM1,MYC,TIMP1,IRF1,CD40,FOS ,FCGR1A,GBP1,IL21,ISG15,CCL19

		,IRF7,PRF1,IFNG,IL2RA,IRF4,S100P,CDKN1A,BCL2L1,BCL2,MVP and others).
GP130	Includes a number of interaction related to functional receptor complexes of pathway JAK_STAT that share a common signal transducing receptor component (IL6ST) belonging to the GP130 family.	The ligand-receptor binding (CNTF:CNTFR:IL6ST, LIF:LIFR:IL6ST, IL11:IL11RA:IL6ST, IL6:IL6R:IL6ST, CTF1:IL6ST, OSM:OSMR:IL6ST, LEPR:LEP:IL6ST, CSF3:CSF3R:IL6ST, IL12A:IL12B:IL12RB1:IL12RB2:IL6ST) enables the activation of different JAKs or combination of them (JAK1:JAK2, JAK1:TYK2, JAK2:TYK2, JAK2) that in turn activates STATs (STAT1/3/4/5). The activated STATs translocate into nucleus and activate the corresponding target genes (including IRF1, IFNG, MYC, IL21, PIM1, IRF4, VIP, CDKN1A, FOS, CD40).
BETA_chain	Includes diverse reactions related to functional receptor complexes of pathway JAK_STAT that share a common signal transducing receptor component (CSF2RB) belonging to the Beta chain family.	The ligand-receptor binding (CSF2:CSF2RA:CSF2RB, IL5:IL5RA:CSF2RB, IL3:IL3RA:CSF2RB) enables the activation of JAK2 that in turn activates STAT5. The activated STAT5 translocate into nucleus and activate the corrresponding target genes (including CCND1, MYC, BCL2L1, CISH).
GAMMA_chain	Includes diverse reactions related to functional receptor complexes of pathway JAK_STAT that share a common signal transducing receptor component (IL2RG) belonging to the Gamma chain family.	The ligand-receptor binding (IL2:IL2RA:IL2RB:IL2RG, IL7:IL7R:IL2RG, IL4:IL4R:IL2RG, IL9:IL9R:IL2RG, IL15:IL15RA:IL2RG) leads to the different combination of JAKs (JAK1:JAK3, JAK1:JAK2, JAK1:TYK2), which in turn activate different STATs (STAT1/3/4/5/6). The activated STATs migrate into nucleus and regulate their target

		genes (including IL21, MMP2, CCND1, IL6ST, HMOX1, FAAH1, REG1A, SOCS1, VEGFA).
TGF_beta	Includes the actions of the transforming growth factor-beta family, which controls the activity of Smad transcription factors.	The ligand-receptor binding (TGFB:TGFBR) activates the SMAD2/3 and other protein kinase (such as MAP3K7, MAPK14, ERK). The activated SMAD2/3 can then translocate into nucleus with the help of SMAD4 to conduct the transcription regulation.
BMP_signaling	This pathway is involved in broad spectra of biological activities in different tissues such as bone, blood vessels, heart, kidney and others. BMPs are members of the transforming growth factor-beta (TGF-beta) family, therefore this pathway has a similar signal transduction structure as TGF_beta.	The ligand-receptor binding (BMP:BMPR1:BMPR2) enables the activation of SMAD1/5/8 and subsequent translocation into nucleus with the help of SMAD4. In nucleus, the SMAD1/5/8 transactivate diverse target genes (such as MSX1/2, IGHA, RUNX2, TCF7, BAMBI, CREB3L2).
Activin_signaling	This pathway has a similar function to the previous described pathway TGF_beta.	The ligand-receptor binding (ACTIVIN:ACVR, GDF11:ACVR, MSTN:ACVR) activates the SMAD1/2/3/5/8 and other protein kinases (such as ERK, MAPK14, JNK).
WNT_signaling	Involves a large number of molecular reactions regulating the production of WNT signaling molecules, interactions with receptors and activation of the downstream molecules. It includes the canonical Wnt pathway and non-canonical Wnt pathway.	**Canonical WNT pathway**: the ligand-receptor binding (WNT:FZD:LRP5/6) leads to the activation of DVL, which in turn inhibits the CTNNB degradation complex. This inhibition of degradation enables the CTNNB freely translocate into the nucleus where this transcription activator regulate many genes transcription (including MYC, CCND1, WISP, JUN, PITX2). **Non-Canonical WNT pathway**: the ligand-receptor binding (WNT_CA:FZD_CA:LRP5/6) activates the LPCB, which leads to production of IP3 and DAG. Both key compounds can then activate the corresponding downstream cellular

		components (including CAMK11, ATF2, MAP3K7, NLK)
Hedgehog_signaling	Functions in a very similar way as the WNT_signaling pathway. It controls the cell proliferation and development begins with the interaction between ligand Hedgehog and transcription factor GLI.	The ligand-receptor binding (PTCH:HH) enables the SMO, SUFU become active, which leads to the activation of GLI. The active GLI migrates into the nucleus and activates a number of target genes (including WNT, CCND, PTCH, FOXs)
SWH_signaling	Possesses a core protein kinase cascade in that a series of serine/threonine protein kinases function to regulate diverse cellular processes such as proliferation, apoptosis and other.	The complex formation of FAT:DCHS leads to the subsequent activation of NF2 and MST, which then enables the complex formation of MOBKL1B:SAV1. This complex activates the LATS, which helps YAP to enter into nucleus to activate many target genes (including JUN, TP73, TGFA, IFITM3, GH1).
Notch_signaling	This is a highly conserved signaling pathway that is involved in the proper development of organs (such as brain, immune system, pancreas, heart, blood vessels). This pathway is also a communication channel in which cells decide to overtake different fate of differentiation.	Via the ligand binding (DLL:NOTCH, JAG:NOTCH, CNTN1:NOTCH), the receptor Notch is cleaved away by the complex (PSEN:APH1A:NCSTN:PSENEN) from the cell surface. The internal portion of the Notch receptor is set free and migrates into the nucleus to transcriptional regulate many target genes (including IL12RA, CDKN1A, PTCRA, DTX1, HEYL).
ABL_signaling	The Abelson non-receptor tyrosine kinase (Abl) signaling pathway is involved in a broad range of biological processes such as oncogenesis, cell growth, adhesion, migration, neurite extension. The pathway PDGF_signaling has considerable influence on this pathway.	The key protein kinase ABL1/2 can be phosphorylated by cellular components (such as PDGFA:PDGFB:SRC, PDGFB:PDGFB:SRC). This activated kinase can phosphorylate in turn its downstream target proteins (such as MDM2, DOK1, CTTN, RAC1, CRK, PXN, POLR2A).
AMPK_signaling	Functions as a sensor of cellular energy status such as regulates food intake and energy expenditure, mediate the effects of	Upon the ligand-receptor binding (ADIPOR:ADIPOQ, LEPR:LEP ??) or the cellular ATP:ADP ratio falls,

	hormones and cytokines such as leptin, adiponectin. Therefore, this pathway controls the different cellular processes such as proliferation.	the kinase AMP-activated kinase protein (AMPK) is activated, which in turn activates diverse downstream cellular components (including TP53, PFKFB2, SREBF1, ELAVL1, EEF2K, MEF2, CRTC2) and negatively regulate the activity of mTor signaling pathway.
ATF_signaling	Including a number of transcriptional regulation based on the functions of activating transcription factor ATF1/2/3/4.	Different members of this transcription factor family exert their corresponding functions to regulate target genes (including JUN, CCL5, TNF, FOS1, RB1, VIP, TP53).
ATM_signaling	Including a number of reactions related to the key regulator ATM (Ataxia Telangiectasia Mutated Protein), which respond to DNA damage processes.	ATM functions as a 'caretaker' and suppresses tumorigenesis in different cellular processes. After activation by DNA damage or auto-phosphorylation, this tumor suppressor regulates many targets including CHK1/2, TP53, RAD51, BRCA, NF-kB.
BDNF_signaling	BDNF and its receptors are broadly expressed in mammalian brains. And the corresponding simulated intracellular signaling is critical for neuronal survival, morphogenesis, and plasticity.	The ligand-receptor binding (BDNF:NTRK2) invokes various intracellular signaling pathways including MAPK_signaling, PI3K_AKT. The ligand-receptor binding (BDNF:NGFR) triggers the activation of CASP proteins.
BRCA_signaling	The genes BRCA1/2 hold the major responsibility for developing breast or ovarian cancer, which are the leading cause of cancer-related deaths allover the world. The pathway including many relevant molecular interactions related to the BRCA1/2.	The BRCA1 forms a complex with BARD1 with help of the activated H2AFX. Within this complex, BARD1 helps BRCA1 to exert its biological function, e.g., regulating target genes (including CDKN1B, DDB2, XPC) and response to the DNA damage signal to halt the cell cycle. The BRCA2 forms a complex with RAD51 helps to halt the cell cycle by receiving DNA damage signal.
Cell_Cycle	A series of cellular events (G0, G1, S, G2 and M) that leads to cell devision and duplication for proliferation.	**G0**: the resting phase where the cell has accomplished a cycle and stopped dividing. **G1**: the begin phase where G1

		checkpoint mechanism (CCND1/2/3 + CDK4/6) ensures the cellular readiness for DNA synthesis. **S**: the DNA replicative phase. The complex CCNE1/2 + CDK2 and CCNA1/2 + CDK2 organize and inspect the DNA replication process. **G2**: the second gap phase where G2 checkpoint mechanism (CCNA1/2 + CDC2) ensures the cellular readiness for enter mitosis phase and divide. **M**: the mitosis phase where cell growth stops and the metaphase checkpoint (CCNB1 + CDC2) ensures the cellular readiness for cell division completion.
DYRK_signaling	Dual specificity tyrosine-regulated kinase (DYRKs) play key roles on the cellular processes such as proliferation and apoptosis and is one of major sensors to a variety of cellular stress conditions including DNA damage, cell cycle arrest. This pathway including many relevant molecular interactions based on functions of DYRKs.	DRYK1A phosphorylates its target protein such as EIF2B5, CCNL2, JNK, CREB, CASP9, FOXO1 and other. DYRK2 can be activated by the phosphorylated ATM and then phosphorylate TP53. DRYK4 can activate protein including MAPT, STAT3 and EIF2B5.
Death_Receptor	Includes the extrinsic and intrinsic apoptosis pathways that are defined as a common property of multicellular organisms.	Upon the ligand-receptor binding (FAS:FASLG, TNFSF10:DR4/5, TNF:TNFRSF1A), different capase proteins (CASP8/10) can be activated to trigger the apoptosis. In response to signals resulting from DNA damage, loss of cell-survive factors or other, pro-apoptotic proteins (including BCL2, BCL2L11, PMAIP, BBC3, BAX, BAK) can promote the mitochondrian release of other pro-apopotoic factors including CYCS, AIFM, EndoG, SMAC.
EGFR_signaling	Epidermal Growth Factor (EGF) signaling pathway is one of the most well studied Receptor Tyrosine Kinases (RTKs) pathway. This pathway regulates activities of a wide range downstream targets and plays key roles in diverse cellular processes including cell growth, proliferation. The	Binding of ligands (AREG, BTC, EGF, EREG, TGFA) to the dimer receptor (EGFR:EGFR, EGFR:ERBB2) enables the auto phosphorylation of the ligand-receptor complex, which in turn invokes signaling cascades, in which

	mutations occurring in different pathway-components such as EGFR, SRC are highly cancer-related.	diverse cellular proteins (including SRC, GRB2, SOS1, PLCG, CBL, JAK1/2) take part in.
EPO_signaling	Including relevant reactions related to erythropoiesis in which a pluripotent hematopoietic stem cell can give rise to mature and stage cells. Erythropoietin (Epo) is therefore usually required for survival, proliferation and differentiation of erythoid progenitor cells.	The ligand-receptor binding (EPO:EPOR) enables the activation of diverse cellular components (including LYN, SYK, JAK2, MAP4K1), which in turn activates their corresponding downstream targets (such as MKK3/6, MAPK14, MYC, CCND, PRKCA, CAMK).
ERK5_signaling	A pathway member of mitogen-activated protein kinase (MAPK) cascades family, which is highly conserved module that is involved in various cellular processes, including cell grow, proliferation, differentiation and migration.	The key component ERK5 can be activated by diverse upstream components such as RAS, MEKK2/3, MEK5, SRC and MAP3K8. The activated ERK5 can then activate the downstream components including CREB, MYC, FOS, SAP1 and SGK.
Ephrin_Eph_signaling	Eph receptors and ephrins form the largest receptor-ligand complexes in the receptor tyrosine kinase family. The signaling pathway influence the cell-cell interaction and migration. The deregulation of this pathway is highly related to the tumor growth, survival, angiogenesis and metastasis.	Upon the ligand-receptor binding (including EFNA:EPHA, EFNB:EPHB) a bi-directional signaling is taking place to transform the signal into downstream targets including ERK, RASA, ACP1, NCK, CTNND, FYN, PTK2.
ERBB_signaling	Including reactions based on receptors (ErbB2/3/4) that regulate signals of cell differentiation, proliferation, migration and survival. This pathway has a very similar structure as the EGFR_signaling.	The ligand-receptor binding (including ERBB4:BTC:ERBB2, ERBB4:NRG3/4:ERBB2, ERBB3:NRG1/2:ERBB2, ERBB4:EREG:ERBB2, ERBB4:HBEGF:ERBB2) enable the activation of diverse cellular components such as KRAS, HRAS, RAF, STAT5, PI3K, PKC, S6K, PICTOR.
Estrogen_signaling	This pathway maintains functions of a wide range of mammalian tissues and plays important roles in cellular processes related to growth, development and reproduction. This pathway including signaling transduction process starting from ligand binding of receptor (including ESR1/2,	The ligand-receptor binding (including Estradiol:ESR1, Estradiol:GPER) enables complex formation with SRC, GRB2:SOS1 or the production of cAMP, which in turn leads to activation of RAC1:GTP, CDC42:GTP,

	GPER) to the activation of downstream targets.	KRAS:GTP, HRAS:GTP, PRKACA, RAP1:GTP, RAPGEF:cAMP and other.
FGF_signaling	Fibroblast Growth Factor (FGF) is one of the well studied Receptor Tyrosine Kinases (RTKs) pathway. The FGF binding can lead to activation of a plethora of signaling pathways involved with cell growth, proliferation and contribute to important functions for normal development, tissue maintenance.	The ligand-receptor binding (FGFR:FGF) enables auto.phosphorylation and the subsequent complex formation with FRS, GRB2, GRB14, GAB1, PI3K, which in turn activates PRKCG, PRKCB, KRAS, HRAS, AKT, ERK, MAP3K7, RASGRP1/2/3/4, CAMK, CREB.
FOXO_signaling	FOXOs belong to a sub family of transcription factor FOXs family which plays important roles in regulating expression of genes that are involved in different cellular processes such as cell growth, proliferation, differentiation and longevity. This pathway including relevant transcription regulations based on the FOXOs function.	The transcription factors FOXOs regulate the expression of their target genes (including CCND, PDK4, CEBPB, IGFBP, PPARG, TGFB2, G6PC, IRS2, ESR1, NOS2, AR). However, their functional activities can be negatively regulated by different protein kinases (such as AKT, DYRK, SGK, JNK).
Growth_Hormone	The effects of growth hormone (GH) can directly influence the cell growth, proliferation and metabolism. This pathway includes major signal transduction processes starting by the GH receptor and mediated by multiple signaling pathways.	The ligand-receptor binding (GHR:GH1, GHR:GH2) enables the complex formation with JAK2, which leads to auto.phosphorylation of JAK2 within the complex. The activated complex GHR:GH1/2:JAK2 can activate diverse downstream components including ERK, AKT, MAP3K7, RASGRP1/2/3/4, CAMK, MAP2K4, MAP2K6, STAT1/3/5.
HIF1_signaling	Directly influencd by the mTor_signaling and MAPK_signaling. Includes a large number of transcriptional regulations based on the function of HIF1.	The activation of HIF1A by ERK or MTOR:MLST8:RPTOR enables the complex formation of ARNT:HIF1A and ARNT2:HIF1A, which then transcriptional regulate many target genes (including ABCB1, IGF2, END1, ADM, VEGFA, HK1, HK2, TGFA, MET).
IGF1R_signaling	This signaling pathway influences the cellular processes including proliferation, cell motility, adhesion and contributes to the apoptosis protection and hypoxia	The ligand-receptor binding (IGF1R:IGF2, IGF1R:IGF1) leads to the recruitment of IRS and SHC and subsequent activation of

	signaling. This pathway is often deregulated in different types of cancer and therefore the receptor IGF1R becomes a putative therapeutic target.	corresponding complexes that in turn regulate the downstream components such as RAF, ERK, PKC, ATF2, MAP3K7, PRKCB, PRKCA, CAMK, SMAD4.
InsulinR_signaling	Insulin is the major hormone controlling energy metabolisms and plays important roles by triggering different signaling pathways.	Insulin (INS) binds to its receptor (INSR), which leads to the tyrosine phosphorylation of IRS. This activation of IRS enables the activation of PI3K and subsequent the PDK, which activates AKT. The activated AKT can regulate a number of its downstream components (including GSK3B, MDM2, PAK1/2, AR, MAP3K8, CASP9). On the other hand, GRB2 and SOS1 are recruited to the activated IRS to trigger the signal cascade MAPK_signaling from RAS, RAF to ERK.
Integrin_signaling	Plays vital roles in cellular processes including cell survival, growth, differentiation, migration, inflammatory responses. This pathway includes relevant interactions related to different integrins, collagens and laminins.	The interactions between integrins and collagen (such as ITGA1:ITGB1:COLLAGEN, ITGA2:ITGB1:COLLAGEN) leads to the phosphorylation of SYK, ILK, MAP3K1 and the subsequent phosphorylation of downstream components (such as GSK3B, MDM2, AKT1S1, PAK). The interaction between integrins and laminin (such as ITGA6:ITGB4:LAMA:LAMB:LAMC, ITGA6:ITGB1:LAMA:LAMB:LAMC) leads to the activation of RAF and RHOA:GTP, which in turn activates the downstream components including ERK, ROCK, MYLK, ETV5, LIML.
KIT_signaling	This pathway helps progenitor cells differentiate into blood and/or vascular endothelial cells and plays important roles in amplification/mobilization processes.	The ligand-receptor binding (KITLG:KIT) enables the recruitment of SRC, GRB10, FYN and subsequent the activation of corresponding complexes that in turn activate MAP3K7, RASGRP1/2/3/4,

		CAMK, MAP2K4, MAP2K6, ATF2, ERK.
MET_Receptor	Induce mitogenic, motogenic, and morphorgenic cellular responses and the activation of this pathway is required for normal cellular development.	The ligand-receptor binding (HGF:MET) recruits GRB2, SOS1, SHC1, GAB1, which in turns activates the downstream components such as CRKL, STAT, RAS, ERK. On the other hand, the ligand-receptor complex can phosphorylate PKC, PRKCA, PRKCB, CAMK, MAP3K7 via the activation of PLCG.
NGF_signaling	This pathway contributes the cellular maintenance between survival and death and has a similar structure as BDNF_signaling.	Followed by the ligand-receptor binding (NGF:NTRK1), the auto.phosphoyrlation of this complex takes place, which leads to the activation of downstream components (including IRS, RAS, ERK, PKC, PRKCA, PRKCB, CAMK, MAP3K7). On the other hand, the ligand-receptor binding (NGF:NGFR) leads to the recruitment of NGFRAP1 and MAGED1, which leads to activation of CASP2/3 to trigger the apoptosis.
Neurotrophin_signaling	Including relevant interactions related to the two members (NTF3, NTF4) of neurotrophin family. This pathway has a similar structure as BDNF_signaling and NGF_signaling.	The ligand-receptor bindings (NTF3:NGFR, NTF3:NTRK3, NTF4:NGFR) enable the activation of downstream components (including IRS, RAS, ERK, PKC, PRKCA, CASP2/3).
TP53_signaling	Receive signals from diverse pathways (such as AMPK_signaling, Death_Receptor, p38MAPK and PI3K_AKT) and transform these information into the transcriptional regulation level. Includes diverse transcriptional regulations based on function of TP53, TP63 and TP73.	The activation of TP53 by different cellular components such as MAPK14, DAPK, AMPK, JNK, HIPK2, CHEK, disables the functional restriction of MDM2 and enables the migration of TP53 into the nucleus to transactivate target genes (including CDKN1A, DUSP1, TGFA, EPHA2, TNFRSF10B, APC).
PAK_signaling	The p21-activated kinases (PAKs) are evolutionally conserved and widely expressed in diverse tissues (including	PAKs (including PAK1-7) can be phosphorylated by different protein kinases such as AKT, CDC42:GTP,

	heart, kidney, lung and other). This pathway includes relevant reactions related to the functions of PAK family members and plays important roles in cellular processes such as mitosis, transcription, translation, cell survival.	AR). The activated PAKs can phosphorylate downstream targets such as MYLK, STMN, LIMK, AURKA, ESR, JNKs, RHOA, RAF, to exert their biological functions.
PDGF_signaling	This pathway plays key roles in different cellular processes such as angiogenesis, proliferation, migration and is highly implicated in tissue remodelling, patterning and morphogenesis.	The different combination bindings between ligands (such as PDGFA, PDGFB, PDGFC, and PDGFD) and receptors (such as PDGFRA and PDGFRB) transduce the signal and convey it to the downstream components. For instance, the activated receptors interact with SRC, PI3K, SHP2, SHC, and PLCG, to transfer the signal further via MAPK14, JNKs, ERK.
PI3K_AKT	Includes relevant reactions starting from PI3K, transfers signal via the activation of AKT into the downstream target components. This pathway has key roles in regulation of cellular processes such as cell growth, proliferation, cell cycle and metabolism.	The PI3Kcomplex (PIK3CA:PIK3R) can be activated by diverse components including different receptor tyrosine kinases (such as EGFR:EGF, KDR:VEGFA, FLT1:PGF), JAKs, EPHA:EFNA and other. The activated PI3KCA can catalyze the production of PIP3 to activate PDK, which in turn activates the AKT. The powerful protein kinase can regulate many downstream proteins including GSK3beta, RHEB, TP53, JNK, FOXO, mTor, CDKN1A, RPS6KB1 and other.
Prolactin_Receptor	Contributes to the mammary development processes by regulating many important genes expression level.	The ligand-receptor binding (PRLR:PRL, PRLR:GH1) lead to the activation of protein kinases such as JAK2, NEK3, TEC, FYN and recruit SRC, GRB2, SOS1, which in turn activate downstream components such as RAC1:GTP, CDC42:GTP, RAS, ERK, STAT1/3/5, IRF, CDH, PRKCA, PRKCB, PKC.
RAR_signaling	Contributes the regulation of different cellular processes and developments via binding of several heterodimeric nuclear receptors. This pathway including relevant	The receptor complex formation (RARA:RXR, RARB:RXR, RARG:RXR) regulate the expression level of many target genes

	reactions related to transcriptional regulation of those nuclear receptor complexes.	including THBD, MAOB, GRNH2, RARG, RARB, PLCG, SFTPB, APOA1.
RET_signaling	RET proto-oncogene encodes a receptor tyrosine kinase, which can invoke a signaling cascade by binding to corresponding ligands. The signaling cascade plays essential roles in diverse cellular processes. The loss/gain of function of RET gene are associated with various types of human cancer.	The ligand-receptor bindings (GDNF:RET, NRTN:RET, PSPN:RET, ARTN:RET) invoke the activation of NCK, CRK, PLCG. These activated components transfer signal further by activating corresponding downstream targets including PRKCA, PRKCG, CAMK, MAP3K7, RASGRP1/2/3/4, MAP4K5. On the other hand, the ligand-receptor complex can recruit GRB2:SOS1 to activate the downstream target such as RAS, ERK.
TEK_signaling	TEK is non-receptor tyrosine kinase, which is expressed in diverse types of cells including hematopoietic cell, T-cell, liver cell and other. The signaling pathway invoked by this kinase exert considerable effect on the regulation of distinct cellular processes such as angiogenesis, proliferation.	The ligand-receptor bindings (ANGPT1:TEK, ANGPTL1:TEK) leads to the auto.phosphorylation of TEK kinase, which in turn recruits and activates various components such as GRB2/7/14, DOK2, PI3K and other. The signal is transferred further via those activations resulted in phosphorylation of MAP4K5, MAP4K1, AKT, PXN and CDH.
TLR_signaling	This pathway plays a crucial role in inflammatory responses and is highly involved also in many other cellular processes such as apoptosis.	After ligand binding, TLRs undergo the conformational changes required for recruitment of downstream signaling components including MyD88, IRAKs, TAK1, TAB2 and other, which in turn activates the downstream components including IRFs, IFN-beta, AP-1, NF-kB, JNKs and other.
VEGF_signaling	Plays key roles in cellular processes related to blood vessels such as angiogenesis, vasculogenesis.	The ligand-receptor bindings (VEGFA:KDR, VEGFA:FLT1, VEGFB:FLT1, VEGFC:KDR, VEGFC:FLT4) enables the auto.phosphorylation of corresponding ligand-receptor complex, which recruits the components such as GRB2, SOS1,

		SHC, PLCG. These recruitments lead to the subsequent activation of diverse downstream targets including CALM, PRKCA, ATF2, PTK2B, RASGRP1, MAP3K7, MAP3K.
mTor_signaling	Function as an important sensor to coordinate different cellular processes with the nutrient level and cellular growth factors. This pathway including the signal transduction processes started from mTor complex 1 (mTORC1) and mTor complex 2 (mTORC2).	After activation by RHEB:GTP, the mTORC1 (MTOR:MLST8:RPTOR) is created, which in turn activates diverse downstream components including PPARGC1, HIF1A, EIF4BP1, EIF4G1, RPS6, PPARG, RPS6KB1, PDCD4. The mTORC2 (MTOR:MAPKAP1:MLST8:PRR5: PICTOR) enables the activation of components including SGK1, PRKCG, PRKCA, NEDD4L, IKBK, RAF.

C.5_Inhibitor_MEK_AKT.pdf

	MEK_inhib	AKT_inhib	Both_inhib
RAF	0.976344	1.00009	0.988892
MEK	4.28965e-06	1.00002	4.28951e-06
ERK	0.0458747	1	0.0469964
ESR	0.885902	6.90277	6.70521
DAPK1	0.878547	0.999997	0.864229
TSC2	0.933519	0.794645	0.093839
HIF1A	0.746605	20.8283	6.97832
RICTOR	0.962039	0.989325	0.668635
PPARG	0.886096	7.07657	7.07657
PI3K	1	1	1
PIP3	1.00438	0.999995	1.00439
AKT	1	1	1
CDKN1A	1.53369	1.73498e-07	2.08968e-07
RPS6KB1	0.63666	0.88609	0.0956084
PDCD4	0.962135	0.989473	0.667106
BAD	0.76929	0.916793	0.39552
EIF4G1	0.928956	0.934588	0.821233
EIF4B	0.961879	0.989335	0.667172

C.8.A_prediction_vs_experiment.pdf

uniProt	Predicted Data	Experimental Data
Q02447	4.078173	26.648453
P17535	23.363533	7.236438
P30613	0.186357	0.832949
Q86Z02	10.315825	0.464445
Q9H0E2	4.861448	30.519299
Q9HB90	6.610548	4.203642
P20936	5.202225	7.575966
Q5HYI8	62.794075	102.457358
P23468	6.002553	3.099466
Q92574	4.6478	6.780868
O00141	105.83876	82.056739
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P62753	1035.33975	200.544651
P42684	4.23838	3.697756
P18031	12.595825	57.578159
O75582	1.135386	1.567625
P61978	46.078465	10.57701
Q05397	99.952988	9.370525
Q14249	87.441343	108.5789
Q14247	234.720771	341.229763
P24928	37.417172	15.961557
P54756	1.665165	2.026288
Q13404	25.8132	62.625138
P07996	210.831962	5.386842
P07858	44.42439	87.008825
Q12933	18.368635	11.153852
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Q9NQC7	2.075044	2.821886
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O43464	19.032086	35.423127
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O00763	1.266566	1.5328
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P19474	1.376109	23.055514
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Q6R327	4.434554	5.56723
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P09619	1.464205	10.279725
P17706	3.275228	3.818563
P23588	278.1692	275.597679
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P08069	20.112635	4.207811
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Q13546	3.26499	7.854393
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P78527	29.174145	35.395402
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P62070	132.830241	104.98721
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Q13177	155.86243	334.049845
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P18405	21.0174	6.983982
P55211	9.428046	5.358539
P55210	27.989709	91.023667
P55212	6.172231	10.343265
P52701	23.67645	22.981796
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Q06124	34.814169	94.392461
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P38398	6.573213	0.738034
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P61077	17.494736	3.052031
Q04637	51.330957	10.607184
P17252	26.110998	63.035384
P38936	4426.609641	51.736115
P40189	29.927949	11.548072
P62826	3789.535	4589.750139
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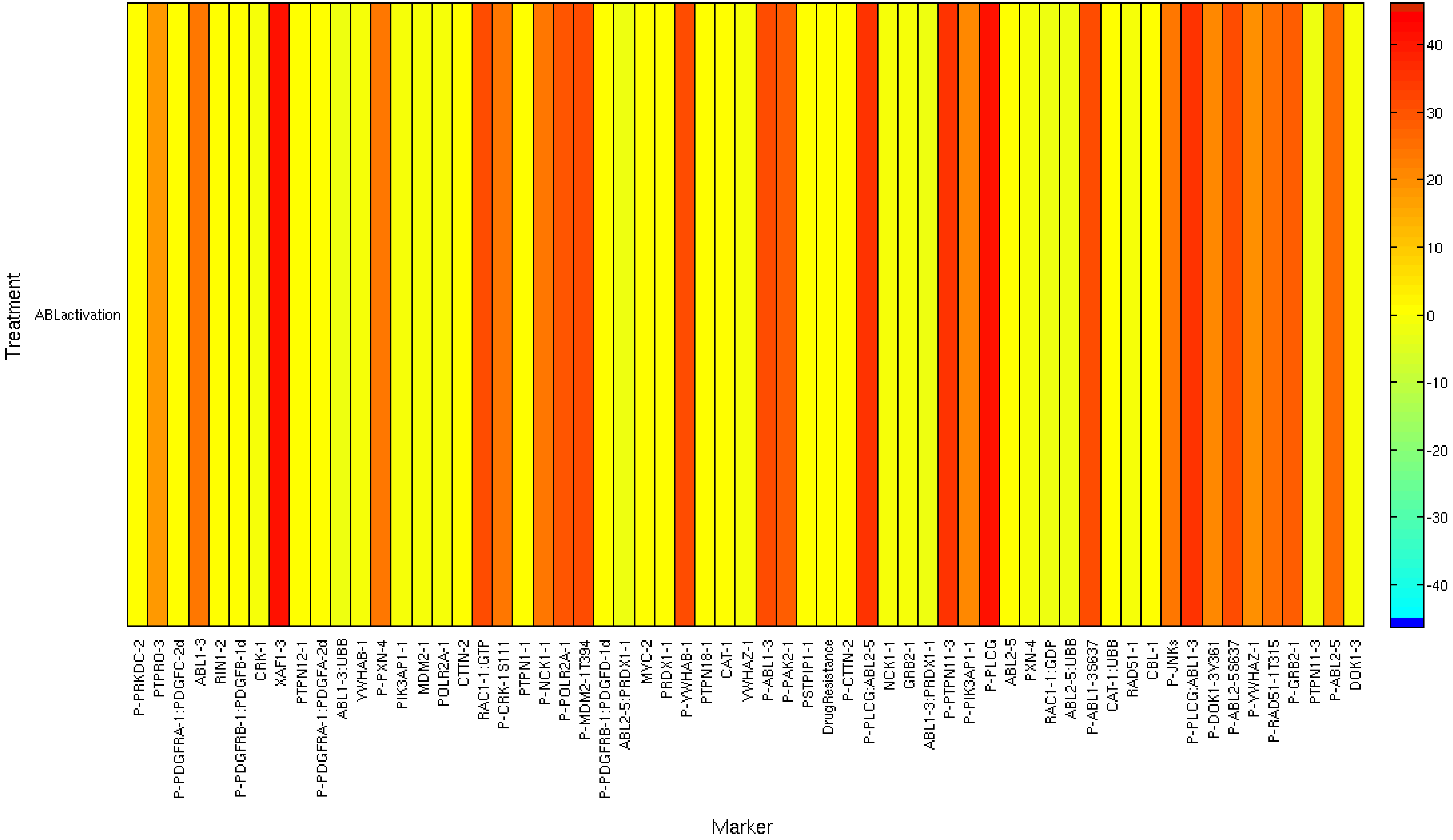
ENSG00000126456:23.580000	Q14653:19.060971
ENSG00000170558:54.920000	P19022:77.815188
ENSG00000133895:16.590000	O00255:8.677442
ENSG00000153094:7.190000	O43521:16.719036
ENSG00000118689:4.870000	O43524:1.022202
ENSG00000178568:1.870000	Q15303:0.623676
ENSG00000142627:30.850000	P29317:9.507591
ENSG00000119487:71.040000	Q9BPZ7:28.630281
ENSG00000067225:1809.740000	P14618:555.575703
ENSG00000092969:6.190000	P61812:39.037530
ENSG00000013374:34.580000	Q9Y5A7:3.742623
ENSG00000147065:330.960000	P26038:2342.413554
ENSG00000105204:4.130000	Q9Y463:1.094552
ENSG00000198001:2.080000	Q9NWZ3:8.169002
ENSG00000108270:48.140000	Q9NY61:56.267111
ENSG00000091513:0.020000	P02787:0.339702
ENSG00000159692:107.610000	Q13363:27.637781
ENSG00000065526:12.090000	Q96T58:2.093809
ENSG00000102580:10.030000	Q13217:115.833604
ENSG00000113161:37.260000	P04035:0.304134
ENSG00000197081:44.240000	P11717:12.387816
ENSG00000055332:5.490000	P19525:93.790495
ENSG00000126458:25.380000	P10301:9.317415
ENSG00000071205:5.760000	A1A4S6:0.120288
ENSG00000171105:1.600000	P06213:0.321324
ENSG00000135318:6.820000	P21589:4.651932
ENSG00000102144:920.280000	P00558:250.983671
ENSG00000099942:21.640000	P46109:106.749081
ENSG00000167193:27.750000	P46108:496.090631
ENSG00000162924:2.250000	Q04864:9.233641
ENSG00000162736:107.300000	Q92542:7.469439
ENSG00000145623:23.170000	Q99650:1.980123
ENSG00000120899:5.000000	Q14289:2.545625
ENSG00000114030:26.110000	P52294:42.156987
ENSG00000169047:4.470000	P35568:0.643396
ENSG00000145191:32.730000	Q13144:18.546943
ENSG00000136167:44.220000	Q5TBN3:0.353237
ENSG00000159399:9.670000	P52789:29.786361
ENSG00000106608:9.410000	Q8TCY9:10.265057
ENSG00000102871:4.810000	Q15628:41.823728
ENSG00000130396:5.510000	P55196:0.256784
ENSG00000159216:3.920000	Q01196:1.034433
ENSG00000078061:40.800000	P10398:35.208447
ENSG00000055130:20.650000	Q13616:14.985029

ENSG00000092820:127.750000	P15311:636.355764
ENSG00000135341:11.280000	O43318:19.451911
ENSG00000101346:27.350000	Q9H488:41.145416
ENSG00000198793:34.490000	P42345:5.668040
ENSG00000126767:31.710000	P19419:5.696358
ENSG00000198561:21.860000	O60716:81.084250
ENSG00000141738:2.590000	Q14451:0.834307
ENSG00000174775:14.650000	P01112:144.391311
ENSG00000085511:5.660000	Q9Y6R4:2.621894
ENSG00000158402:7.220000	P30307:12.877132
ENSG00000169016:4.080000	O75461:17.031333
ENSG00000163848:14.600000	Q9UQR1:10.911213
ENSG00000160691:62.810000	P29353:51.966853
ENSG00000138448:28.000000	P06756:66.115193
ENSG00000166813:3.770000	Q2M1P5:0.018626
ENSG00000089159:27.860000	P49023:81.498961
ENSG00000087586:40.460000	O14965:4.455662
ENSG00000115904:8.640000	Q07889:0.823922
ENSG00000196419:279.540000	P12956:1501.605445
ENSG00000106070:24.910000	Q13322:20.012788
ENSG00000141646:12.980000	Q13485:39.321590
ENSG00000221978:44.380000	Q96S94:5.736337
ENSG00000109458:3.120000	Q13480:2.080239
ENSG00000112062:20.080000	Q16539:120.940231
ENSG00000153071:81.890000	P98082:96.957452
ENSG00000125740:1.930000	P53539:5.457915
ENSG00000047410:34.410000	P12270:14.568394
ENSG00000164951:3.650000	Q9P0J1:13.858703
ENSG00000164171:3.000000	P17301:5.711422
ENSG00000087088:89.540000	Q07812:413.312705
ENSG00000156515:56.400000	P19367:51.599310
ENSG00000171552:27.350000	Q07817:49.858924
ENSG00000127947:33.080000	Q05209:6.795312
ENSG00000186298:95.500000	P36873:175.737694
ENSG00000097007:63.290000	P00519:2.158232
ENSG00000121022:37.300000	Q92905:585.587042
ENSG00000101773:13.440000	Q99708:1.023698
ENSG00000197555:15.790000	O43166:2.195302
ENSG00000074696:46.200000	Q9P035:278.065309
ENSG00000078900:2.530000	O15350:0.001884
ENSG00000086758:88.940000	Q7Z6Z7:10.582142
ENSG00000101849:14.340000	O60907:8.822025
ENSG00000172936:12.490000	Q99836:16.667081
ENSG00000123124:5.720000	Q9H0M0:0.329123
ENSG00000080815:17.090000	P49768:10.476899
ENSG00000117335:43.020000	P15529:2.031844
ENSG00000105974:73.110000	Q03135:253.824912
ENSG00000213281:14.650000	P01111:144.391311
ENSG00000133703:14.650000	P01116:144.391311
ENSG00000132646:82.300000	P12004:2755.445811
ENSG00000010810:15.350000	P06241:1.466564
ENSG00000164305:4.910000	P42574:53.223445

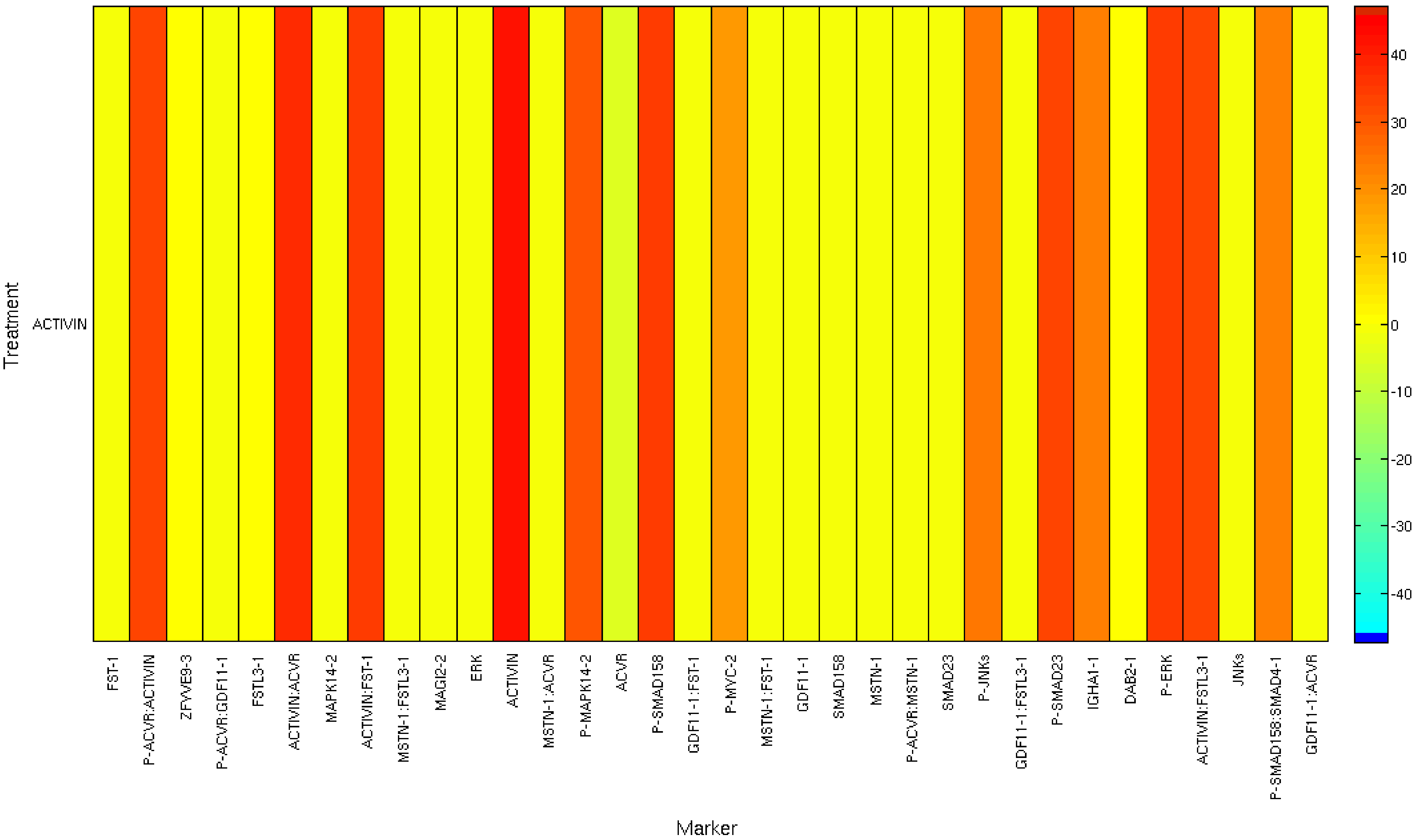
ENSG00000106144:23.220000	P42575:14.787433

Heatmaps (Simulation Results)

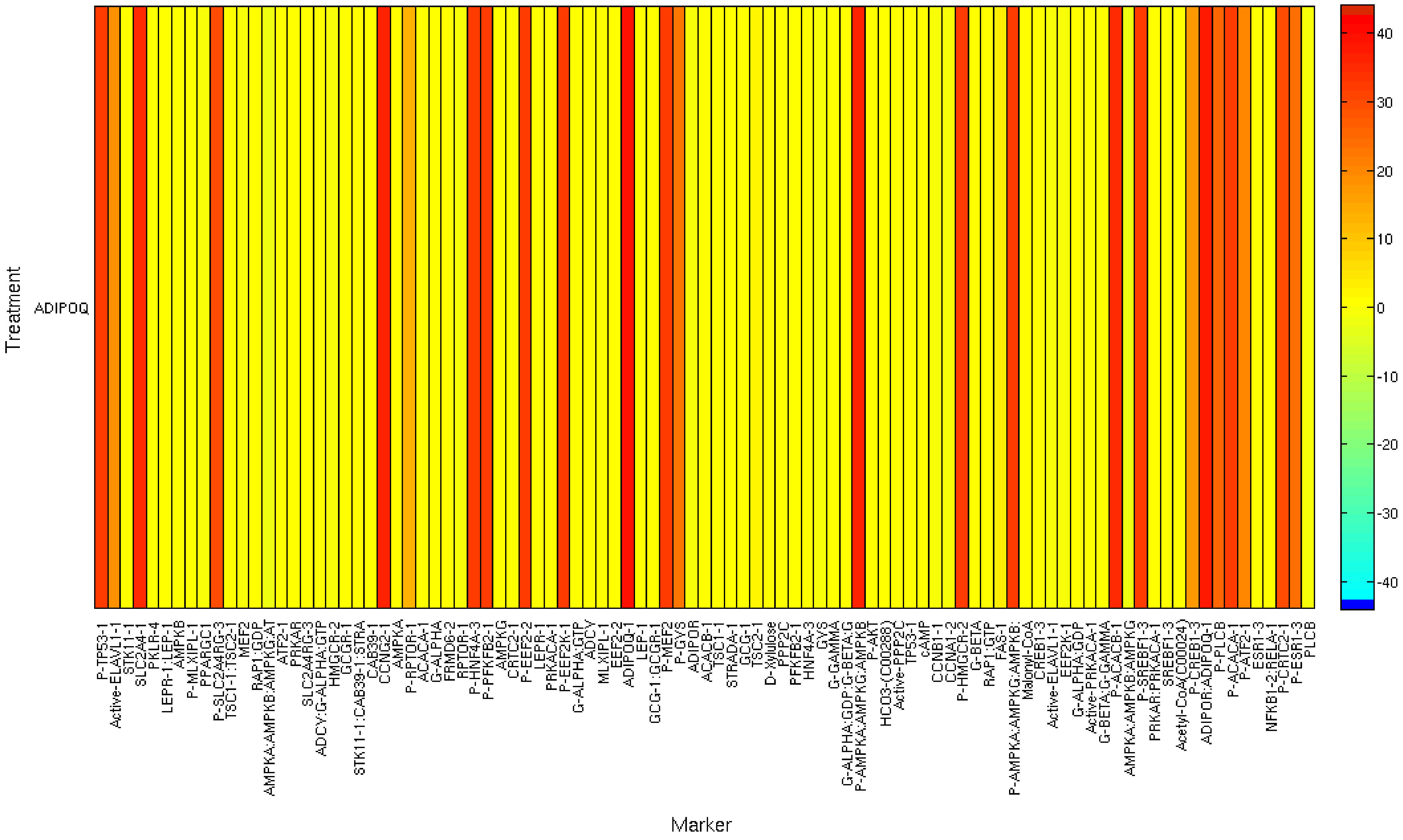


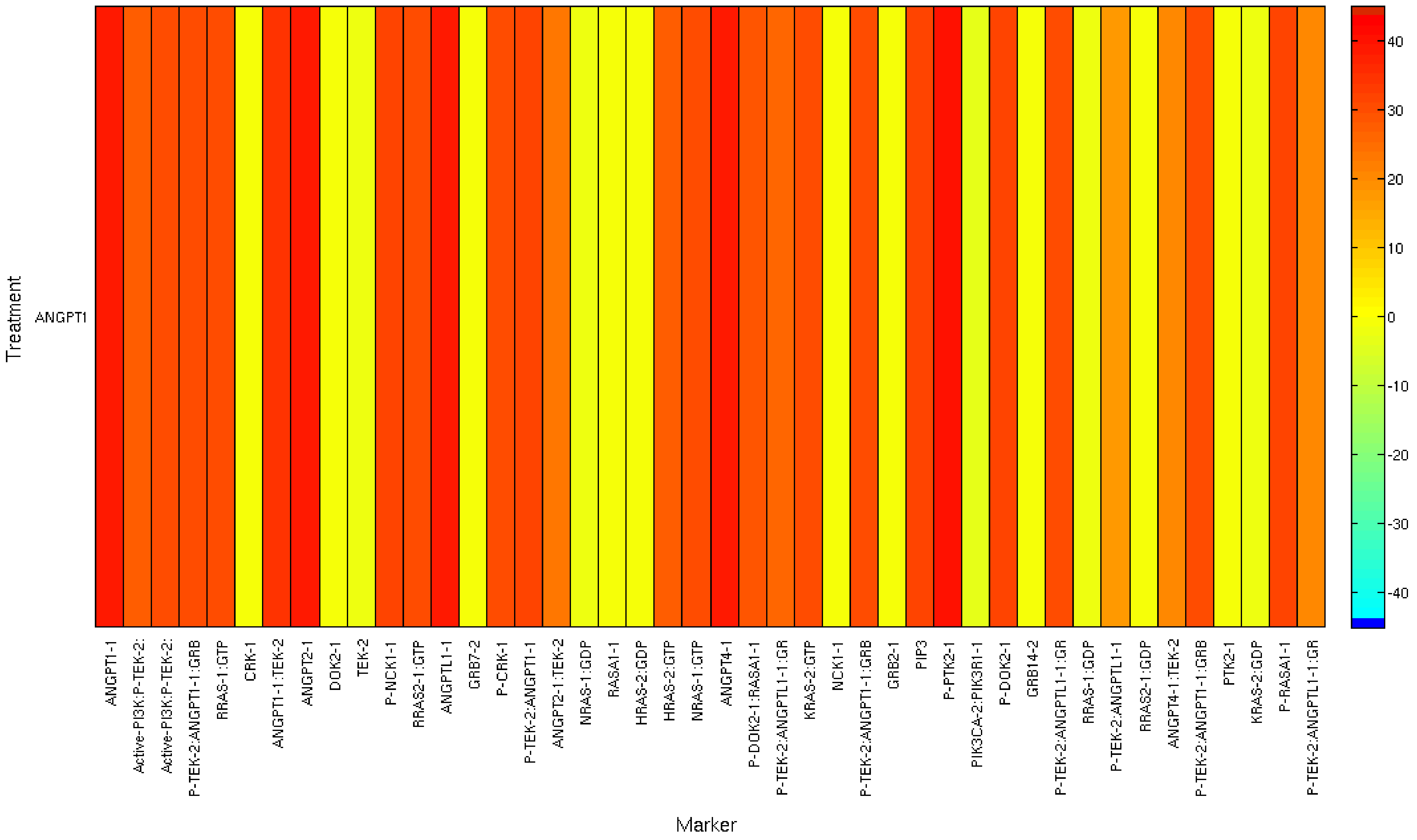
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_A$BL.tsv

Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{A}$CTIVIN.tsv



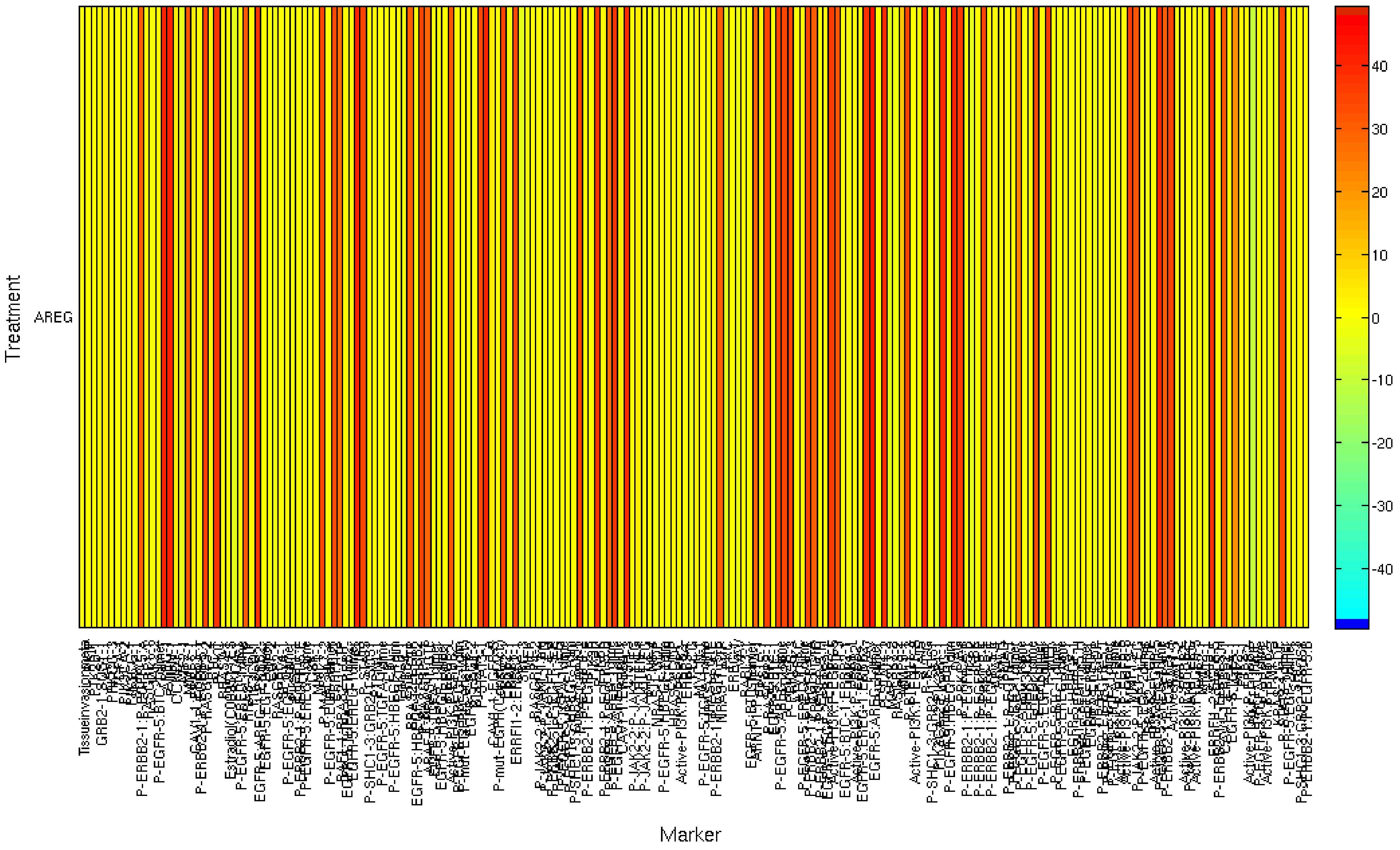
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_A$DIPOQ.tsv

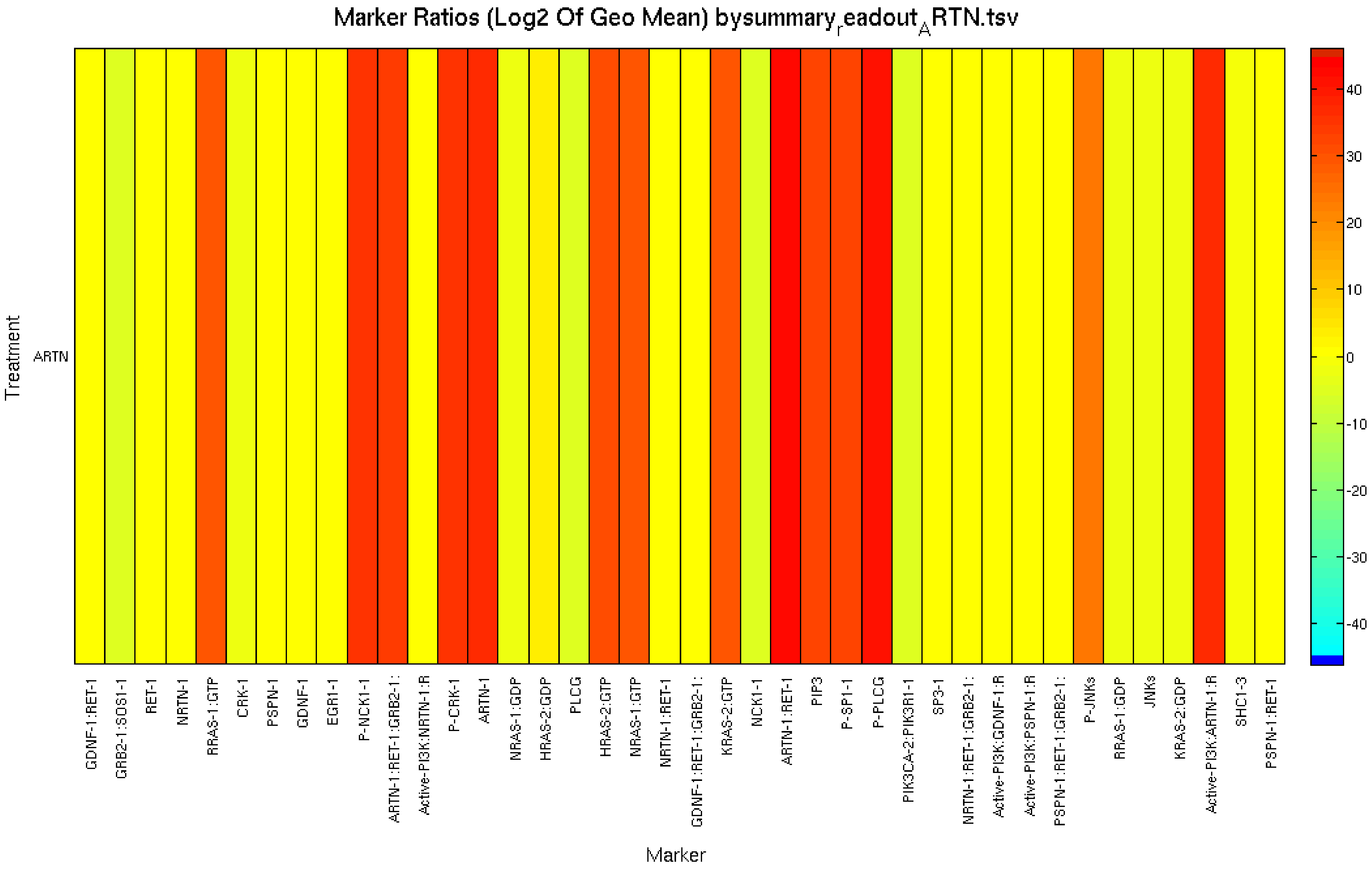




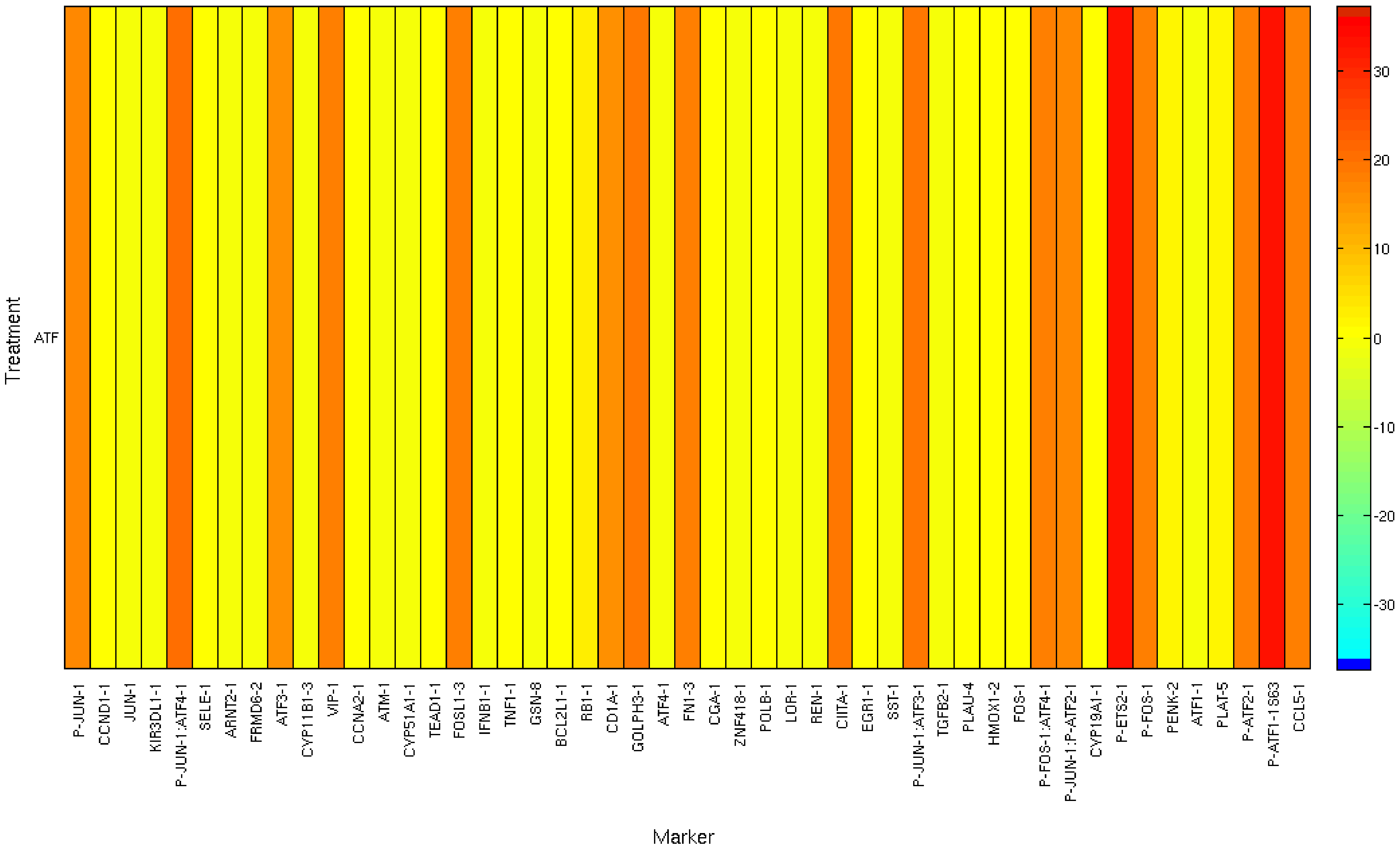
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_A$NGPT.tsv

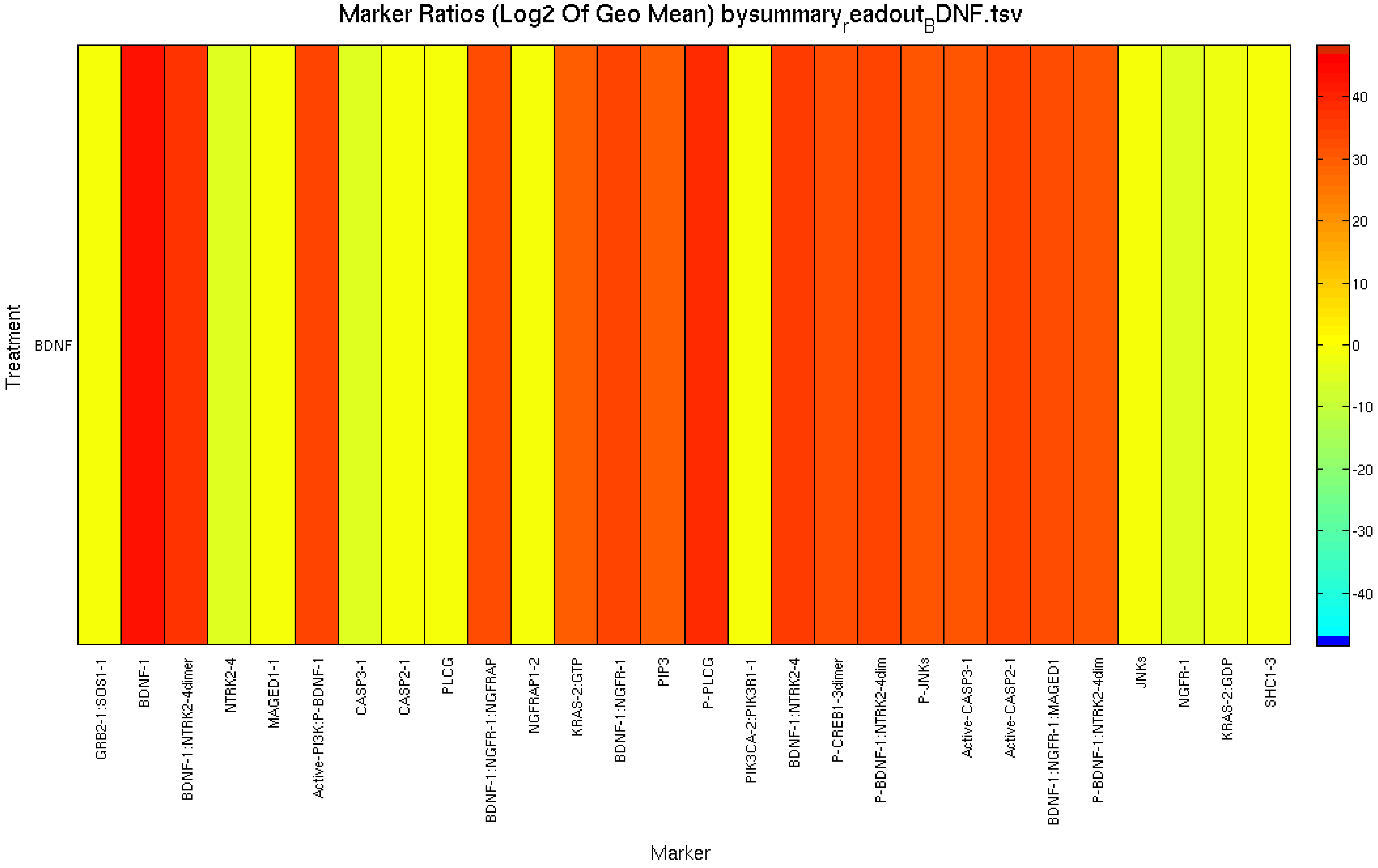
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_A$REG.tsv



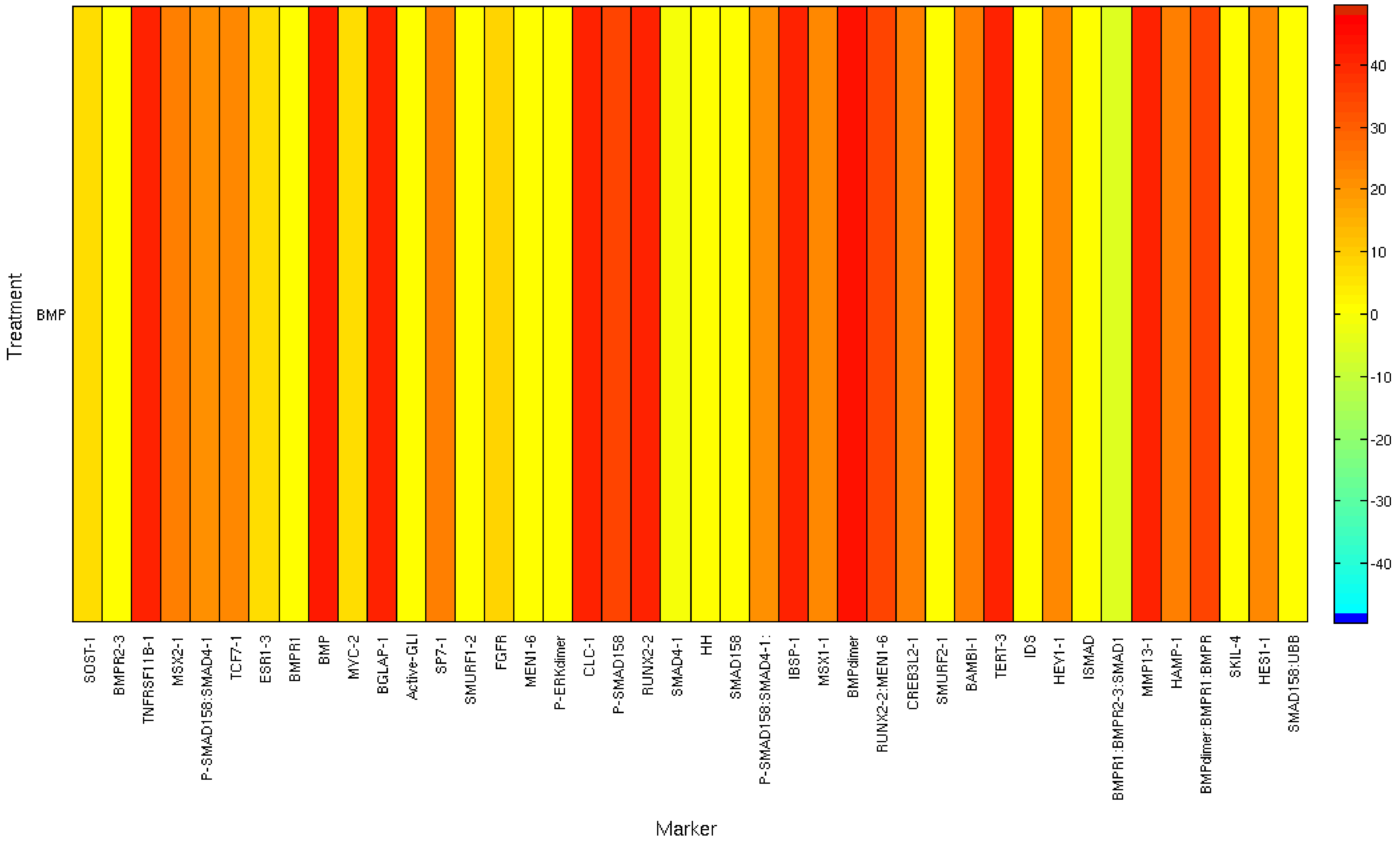

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_A$RTN.tsv
Treatment
ARTN
GDNF-1:RET-1
GRB2-1:SOS1-1
RET-1
NRTN-1
RRAS-1:GTP
CRK-1
PSPN-1
GDNF-1
EGR1-1
P-NCK1-1
ARTN-1:RET-1:GRB2-1:
Active-PI3K:NRTN-1:R
P-CRK-1
ARTN-1
NRAS-1:GDP
HRAS-2:GDP
PLCG
HRAS-2:GTP
NRAS-1:GTP
NRTN-1:RET-1
GDNF-1:RET-1:GRB2-1:
KRAS-2:GTP
NCK1-1
ARTN-1:RET-1
PIP3
P-SP1-1
P-PLCG
PIK3CA-2:PIK3R1-1
SP3-1
NRTN-1:RET-1:GRB2-1:
Active-PI3K:GDNF-1:R
Active-PI3K:PSPN-1:R
PSPN-1:RET-1:GRB2-1:
P-JNKs
RRAS-1:GDP
JNKs
KRAS-2:GDP
Active-PI3K:ARTN-1:R
SHC1-3
PSPN-1:RET-1
Marker
40
30
20
10
0
-10
-20
-30
-40

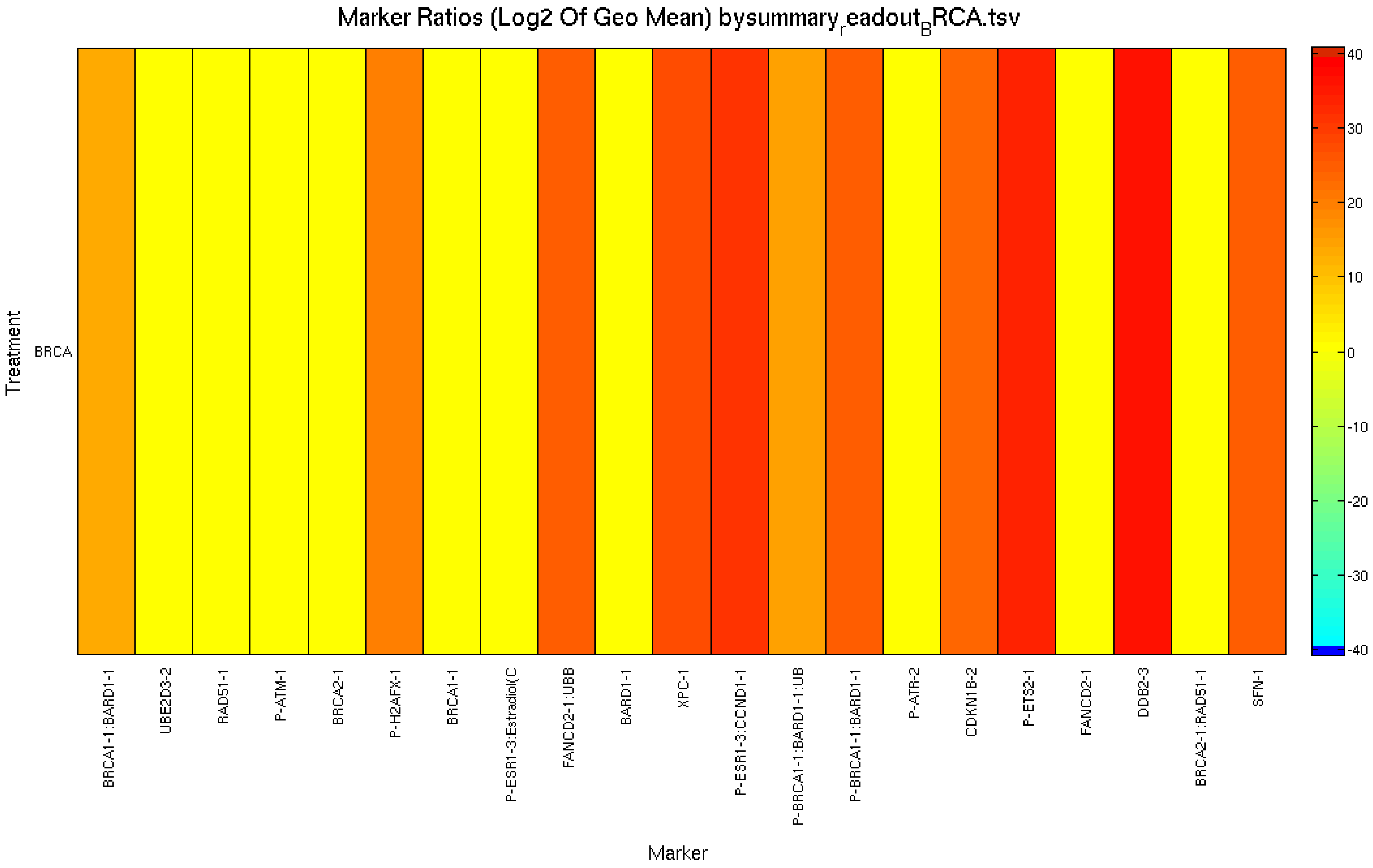
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_A$TF.tsv

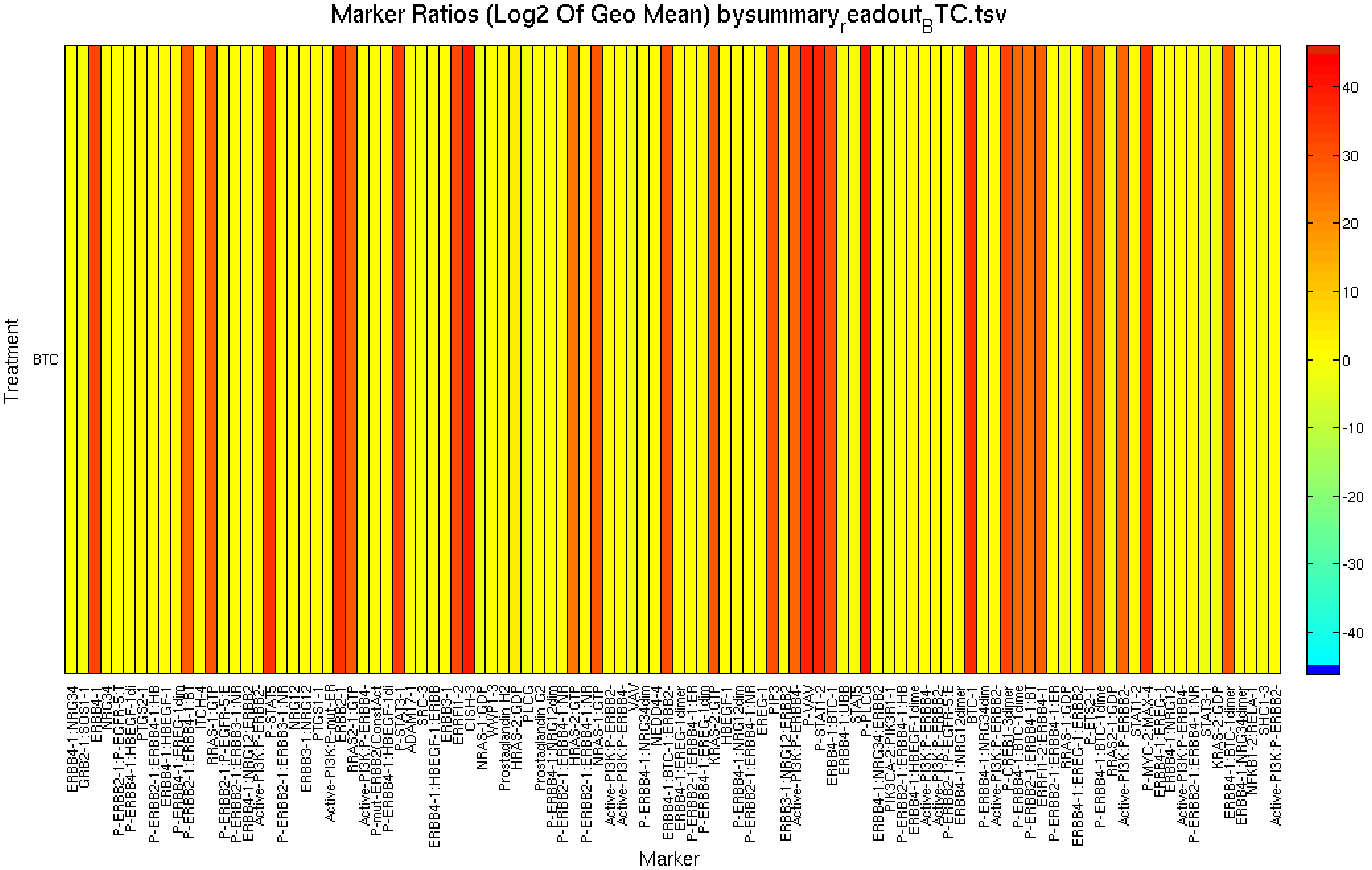



Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{B}$DNF.tsv
Treatment
BDNF
Marker
GRB2-1:SOS1-1
BDNF-1
BDNF-1:NTRK2-4dimer
NTRK2-4
MAGED1-1
Active-PI3K:P-BDNF-1
CASP3-1
CASP2-1
PLCG
BDNF-1:NGFR-1:NGFRAP
NGFRAP1-2
KRAS-2:GTP
BDNF-1:NGFR-1
PIP3
P-PLCG
PIK3CA-2:PIK3R1-1
BDNF-1:NTRK2-4
P-CREB1-3dimer
P-BDNF-1:NTRK2-4dim
P-JNKs
Active-CASP3-1
Active-CASP2-1
BDNF-1:NGFR-1:MAGED1
P-BDNF-1:NTRK2-4dim
JNKs
NGFR-1
KRAS-2:GDP
SHC1-3
40
30
20
10
0
-10
-20
-30
-40

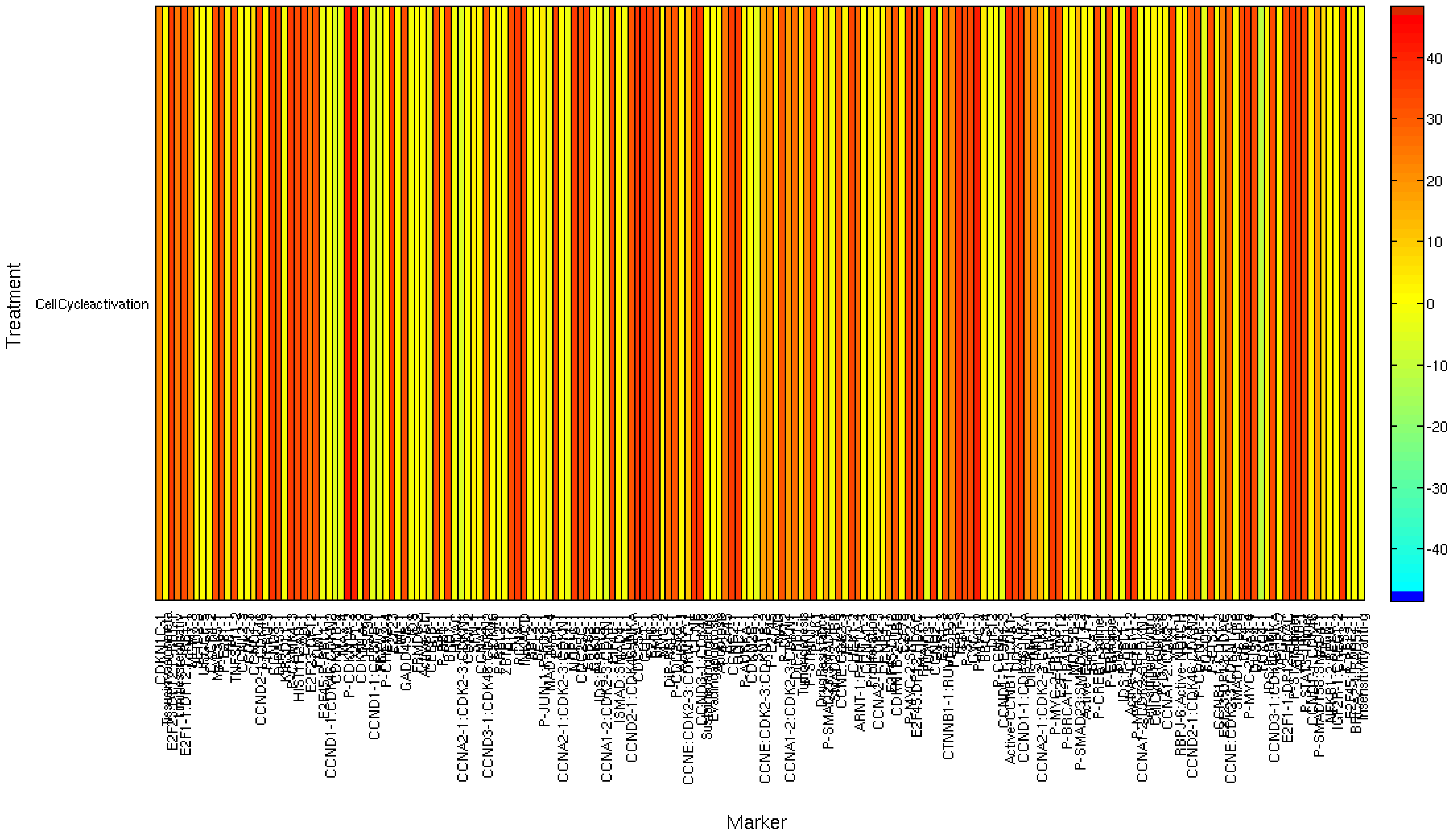
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_B$MP.tsv




Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_B$RCA.tsv
Treatment
BRCA
Marker
BRCA1-1:BARD1-1
UBE2D3-2
RAD51-1
P-ATM-1
BRCA2-1
P-H2AFX-1
BRCA1-1
P-ESR1-3:Estradiol(C
FANCD2-1:UBB
BARD1-1
XPC-1
P-ESR1-3:CCND1-1
P-BRCA1-1:BARD1-1:UB
P-BRCA1-1:BARD1-1
P-ATR-2
CDKN1B-2
P-ETS2-1
FANCD2-1
DDB2-3
BRCA2-1:RAD51-1
SFN-1
40
30
20
10
0
-10
-20
-30
-40

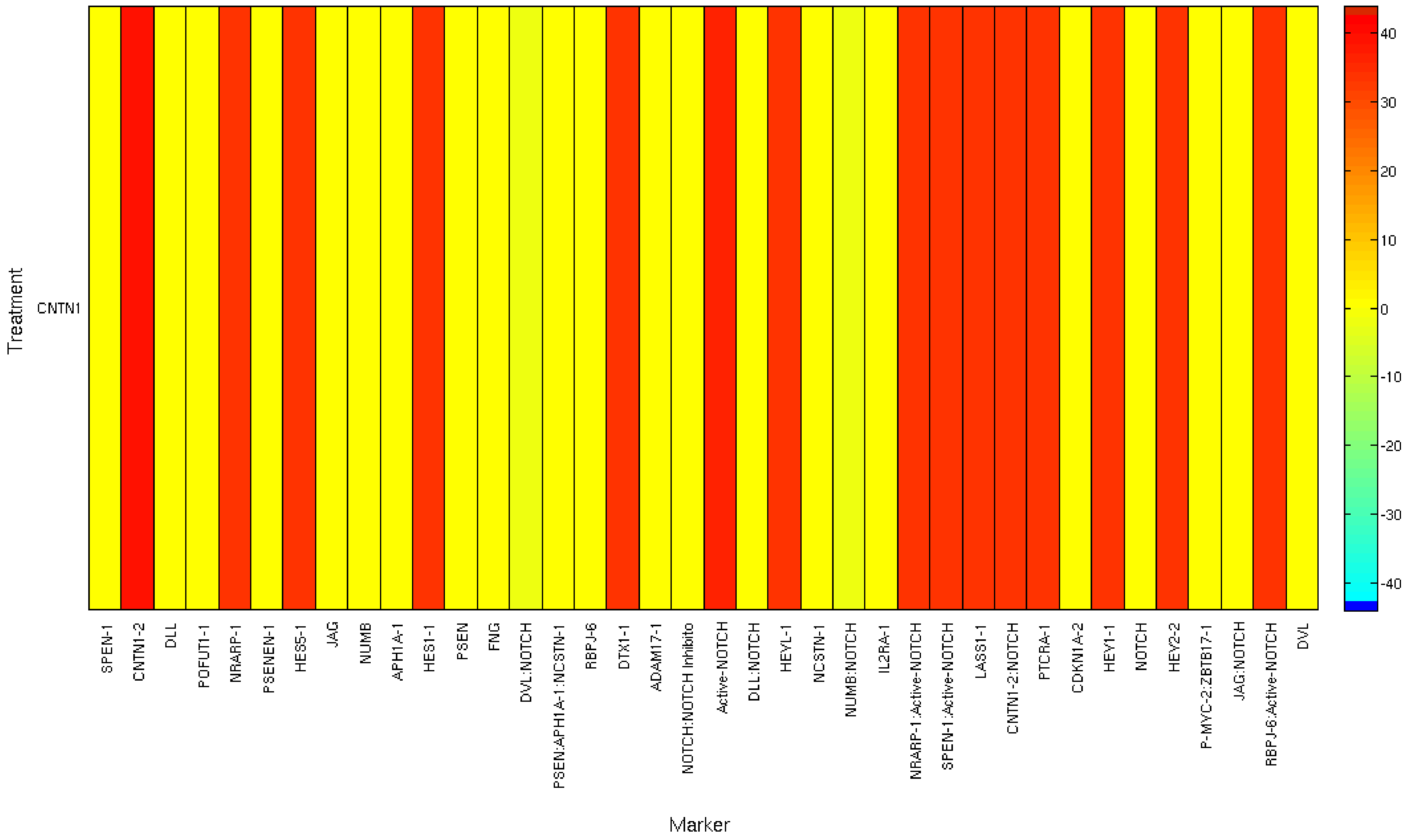

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_B$TC.tsv
Treatment
BTC
Marker
40
30
20
10
0
-10
-20
-30
-40
ERBB4-1:NRG34
GRB2-1:SOS1-1
ERBB4-1
NRG34
P-ERBB2-1:P-EGFR-5:T
P-ERBB4-1:HBEGF-1di
PTGS2-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1
P-ERBB4-1:EREG-1dim
P-ERBB2-1:ERBB4-1:BT
ITCH-4
RRAS-1:GTP
P-ERBB2-1:P-EGFR-5:E
P-ERBB2-1:ERBB3-1:NR
ERBB4-1:NRG12:ERBB2
Active-PI3K:P-ERBB2-
P-STAT5
P-ERBB2-1:ERBB3-1:NR
NRG12
ERBB3-1:NRG12
PTGS1-1
Active-PI3K:P-mut-ER
ERBB2-1
RRAS2-1:GTP
Active-PI3K:P-ERBB4-
P-mut-ERBB2/ConstAct
P-ERBB4-1:HBEGF-1di
P-STAT3-1
ADAM17-1
SRC-3
ERBB4-1:HBEGF-1:ERBB
ERBB3-1
ERRFI1-2
CISH-3
NRAS-1:GDP
WWP1-3
Prostaglandin H2
HRAS-2:GDP
PLCG
Prostaglandin G2
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
HRAS-2:GTP
P-ERBB2-1:ERBB4-1:NR
NRAS-1:GTP
Active-PI3K:P-ERBB2-
Active-PI3K:P-ERBB4-
VAV
P-ERBB4-1:NRG34dim
NEDD4-4
ERBB4-1:BTC-1:ERBB2-
ERBB4-1:EREG-1dimer
P-ERBB2-1:ERBB4-1:ER
P-ERBB4-1:EREG-1dim
KRAS-2:GTP
HBEGF-1
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
EREG-1
PIP3
ERBB3-1:NRG12:ERBB2
Active-PI3K:P-ERBB4-
P-VAV
P-STAT1-2
ERBB4-1:BTC-1
ERBB4-1:UBB
STAT5
P-PLCG
ERBB4-1:NRG34:ERBB2
PIK3CA-2:PIK3R1-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1dime
Active-PI3K:P-ERBB4-
Active-PI3K:P-ERBB2-
P-ERBB2-1:P-EGFR-5:E
ERBB4-1:NRG12dimer
BTC-1
P-ERBB4-1:NRG34dim
Active-PI3K:P-ERBB2-
P-CREB1-3dimer
P-ERBB4-1:BTC-1dime
P-ERBB2-1:ERBB4-1:BT
ERRFI1-2:ERBB4-1
P-ERBB2-1:ERBB4-1:ER
RRAS-1:GDP
ERBB4-1:EREG-1:ERBB2
P-ETS2-1
P-ERBB4-1:BTC-1dime
RRAS2-1:GDP
Active-PI3K:P-ERBB2-
STAT1-2
P-MYC-2:MAX-4
ERBB4-1:EREG-1
ERBB4-1:NRG12
Active-PI3K:P-ERBB4-
P-ERBB2-1:ERBB4-1:NR
STAT3-1
KRAS-2:GDP
ERBB4-1:BTC-1dimer
ERBB4-1:NRG34dimer
NFKB1-2:RELA-1
SHC1-3
Active-PI3K:P-ERBB2-

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_C$ellCycle.tsv

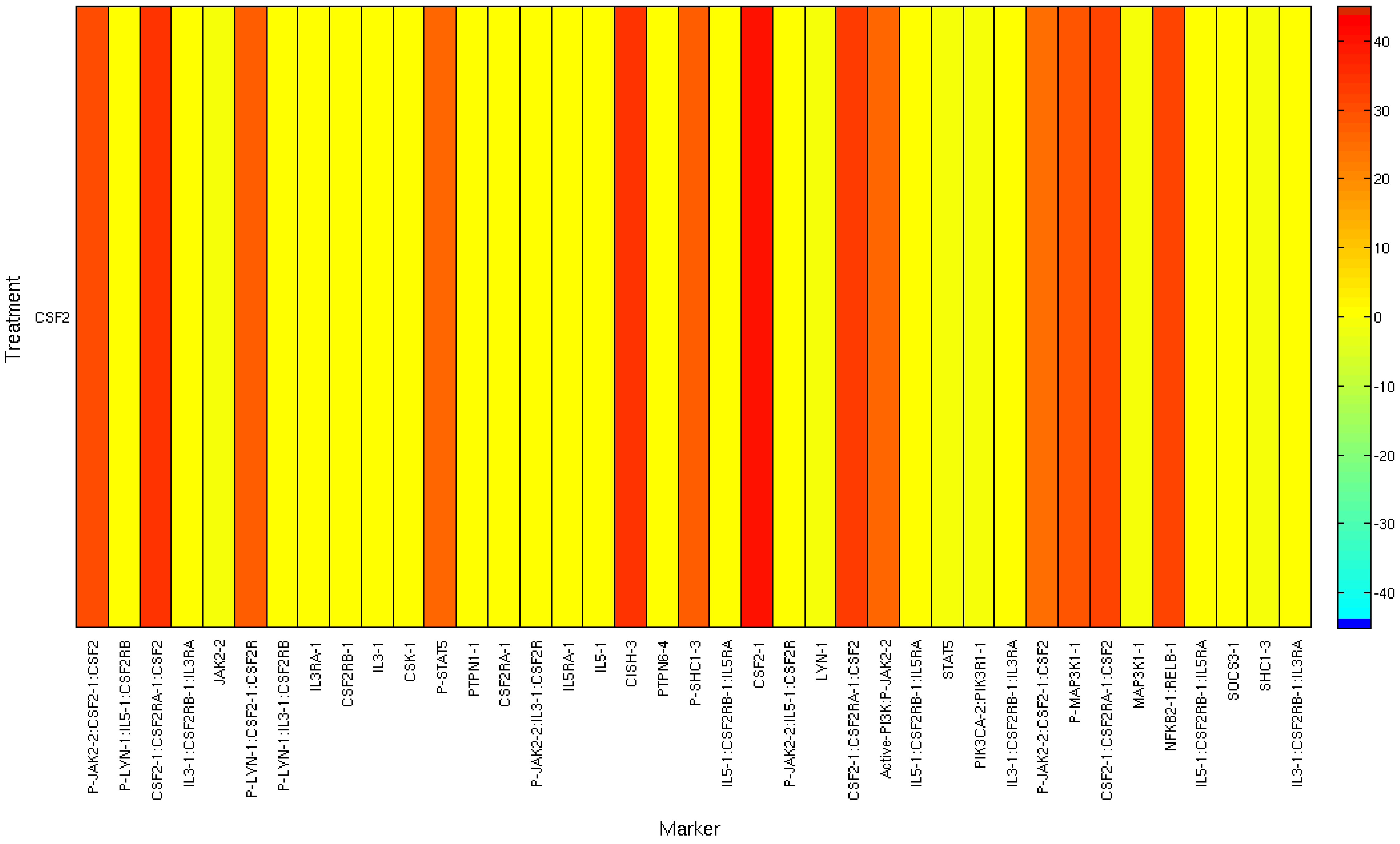


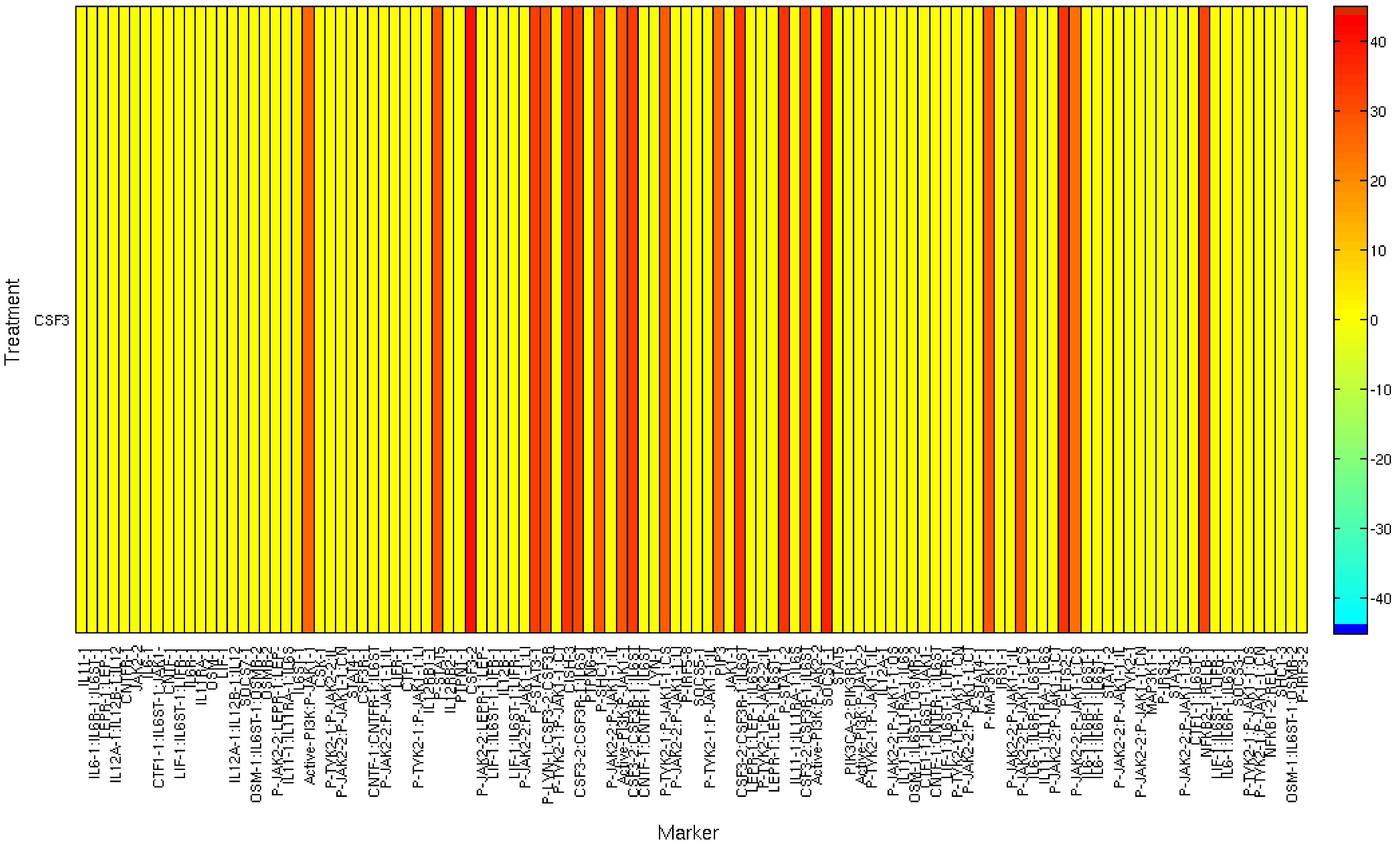

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_CNTF.tsv
Treatment
CNTF
Marker
40
30
20
10
0
-10
-20
-30
-40

Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{C}$NTN1.tsv

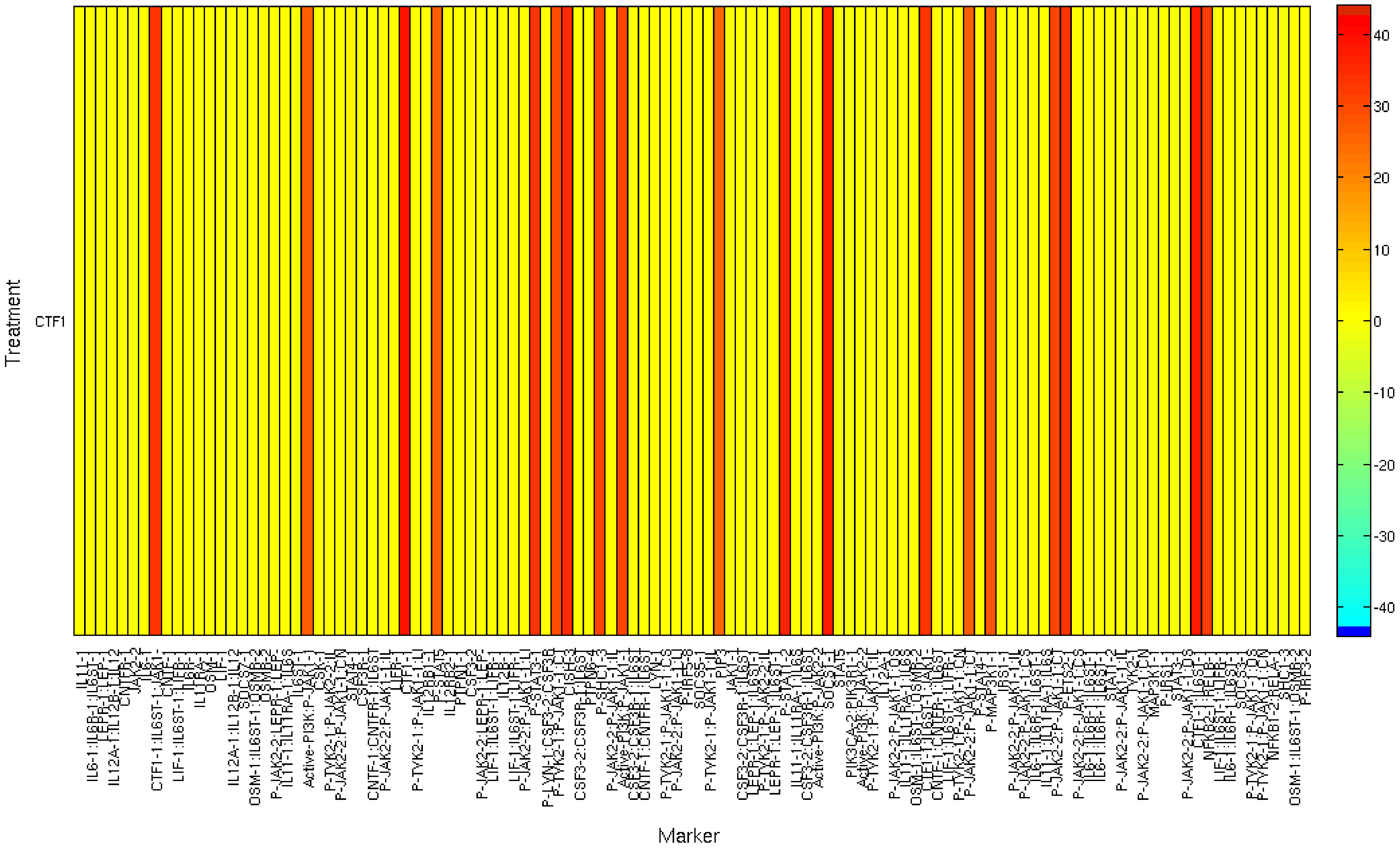


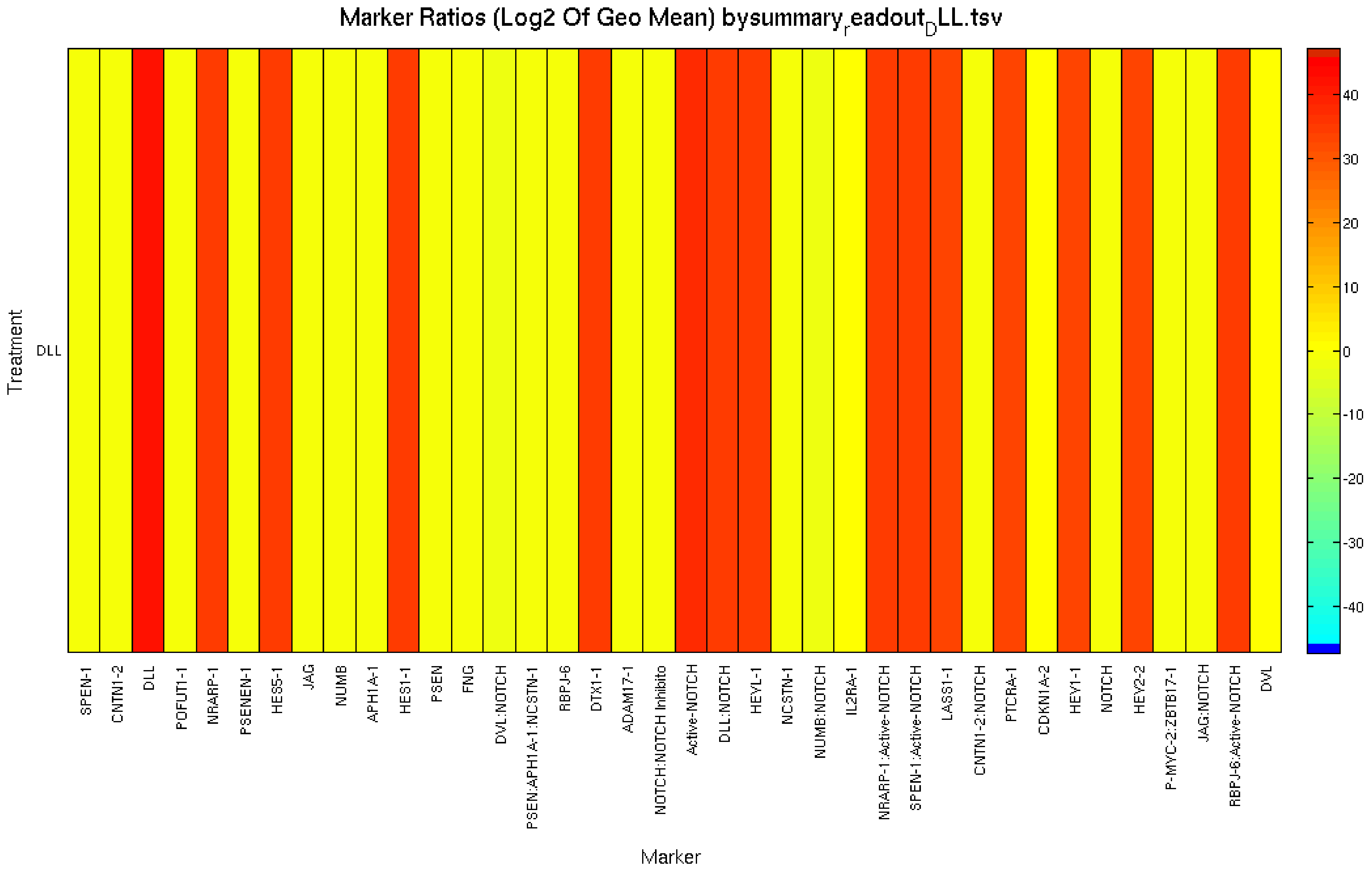
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_C$SF2.tsv

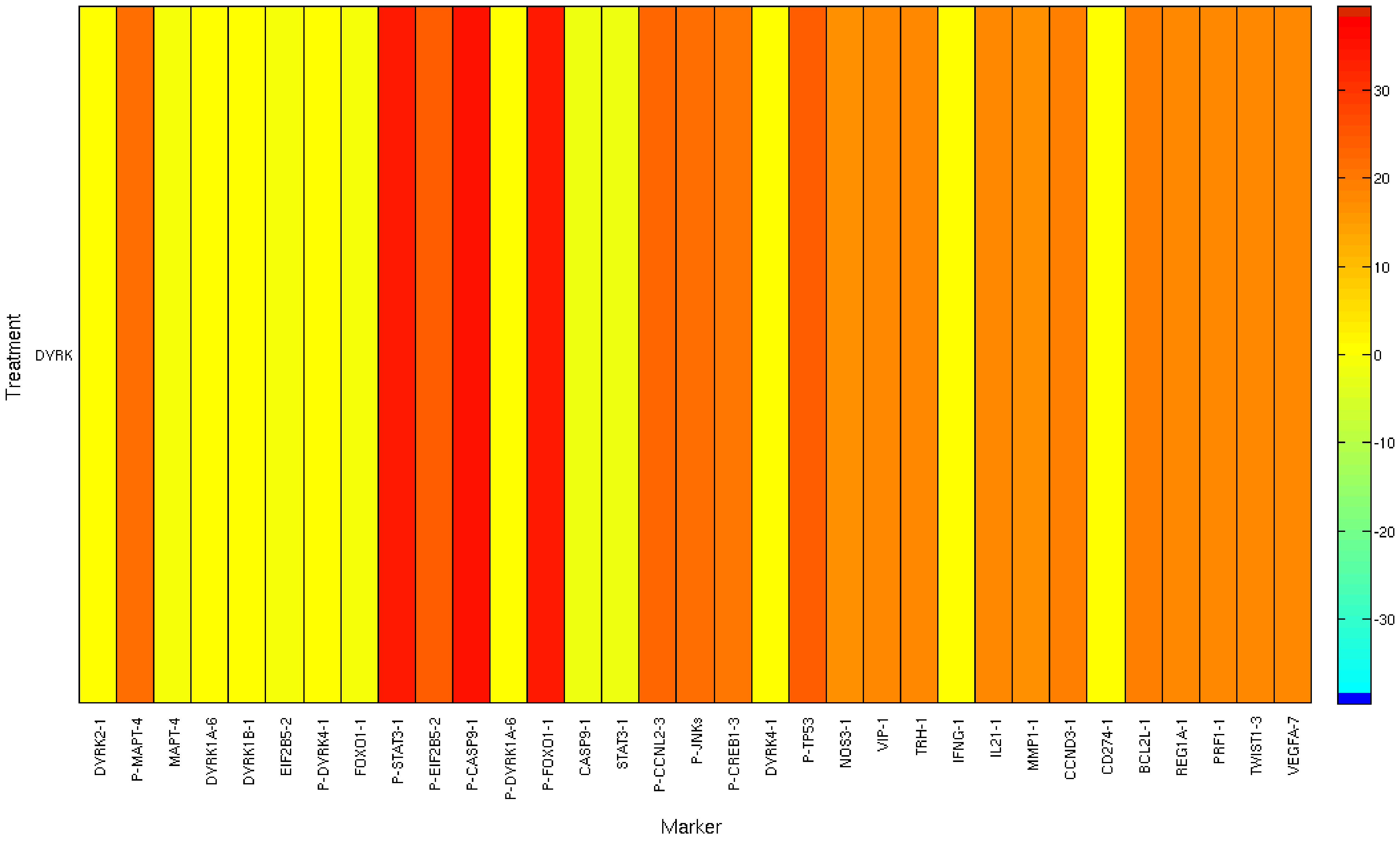



Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_C$SF3.tsv

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_C$TF1.tsv

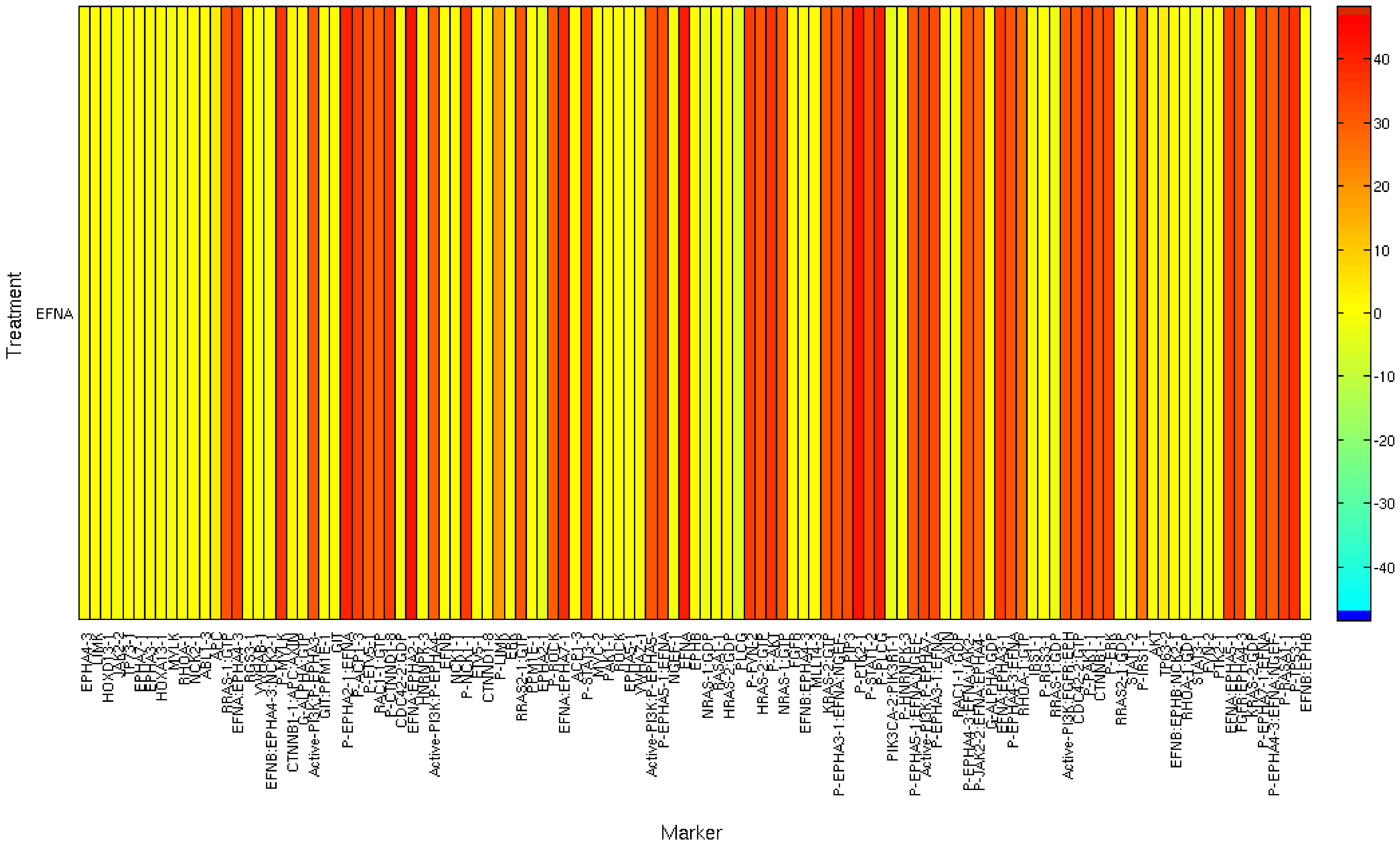



Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_D$LL.tsv
Treatment
DLL
SPEN-1
CNTN1-2
DLL
POFUT1-1
NRARP-1
PSENEN-1
HES5-1
JAG
NUMB
APH1A-1
HES1-1
PSEN
FNG
DVL:NOTCH
PSEN:APH1A-1:NCSTN-1
RBPJ-6
DTX1-1
ADAM17-1
NOTCH:NOTCH Inhibito
Active-NOTCH
DLL:NOTCH
HEYL-1
NCSTN-1
NUMB:NOTCH
IL2RA-1
NRARP-1:Active-NOTCH
SPEN-1:Active-NOTCH
LASS1-1
CNTN1-2:NOTCH
PTCRA-1
CDKN1A-2
HEY1-1
NOTCH
HEY2-2
P-MYC-2:ZBTB17-1
JAG:NOTCH
RBPJ-6:Active-NOTCH
DVL
Marker
40
30
20
10
0
-10
-20
-30
-40

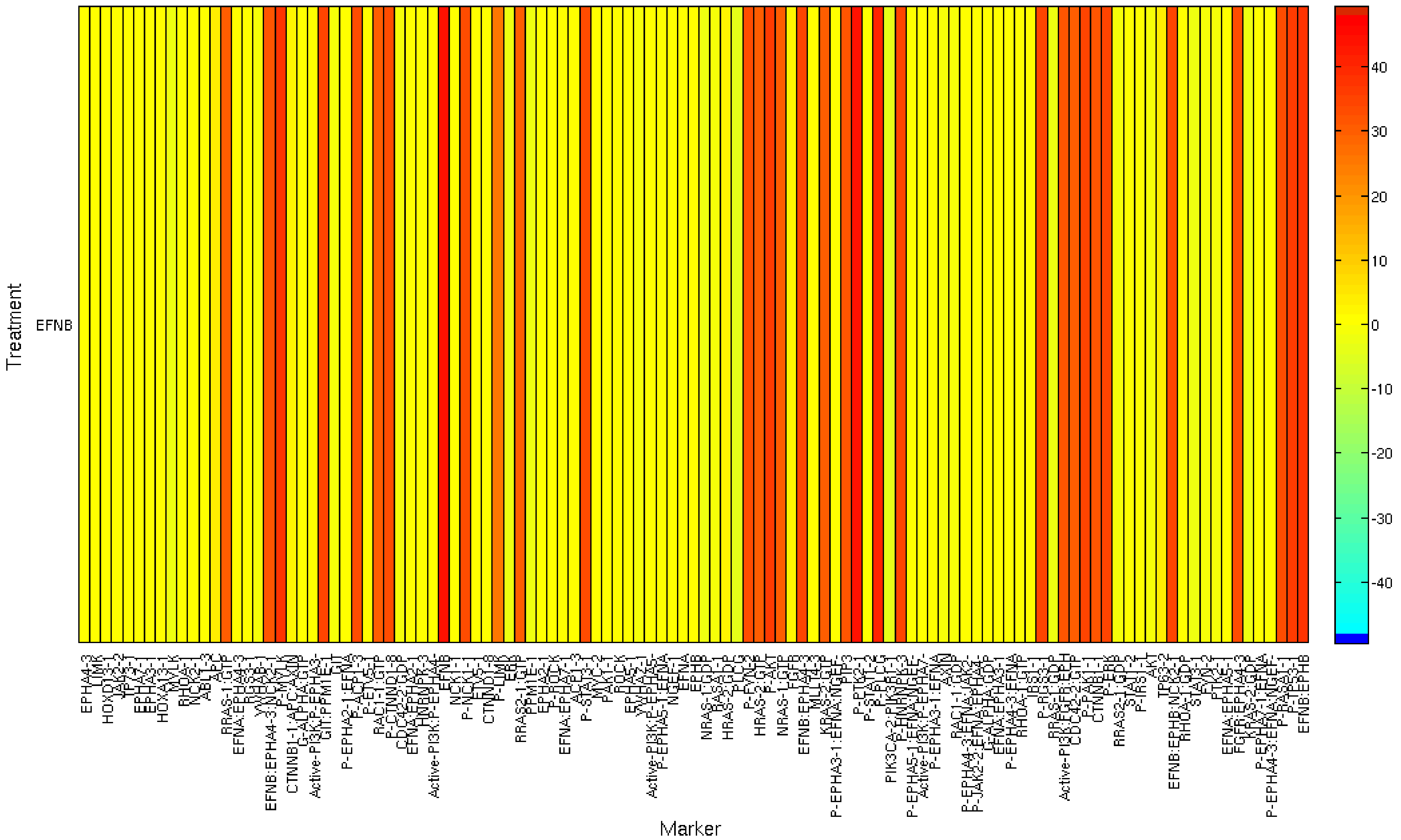


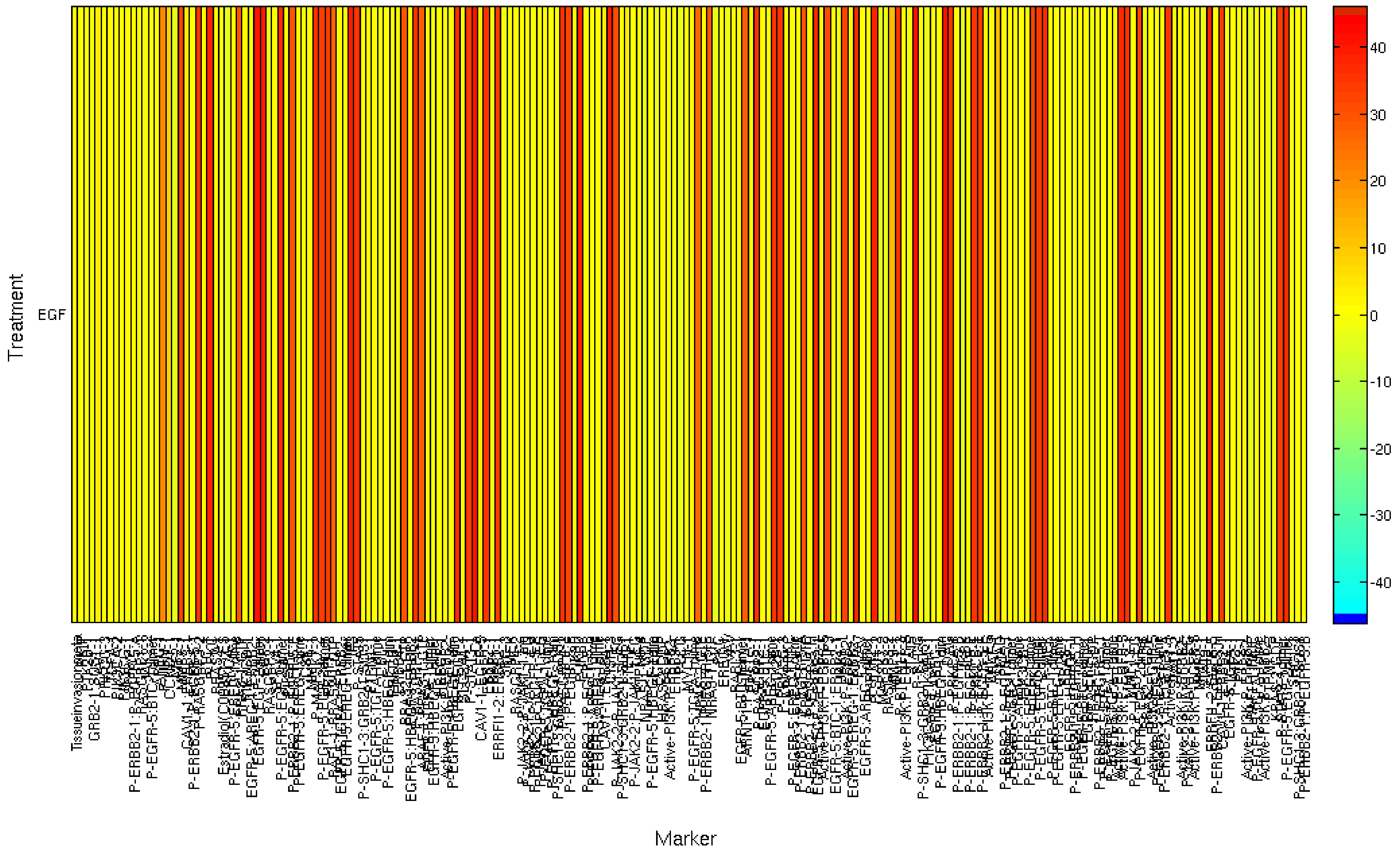
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_D$YRK.tsv

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_E$FNA.tsv

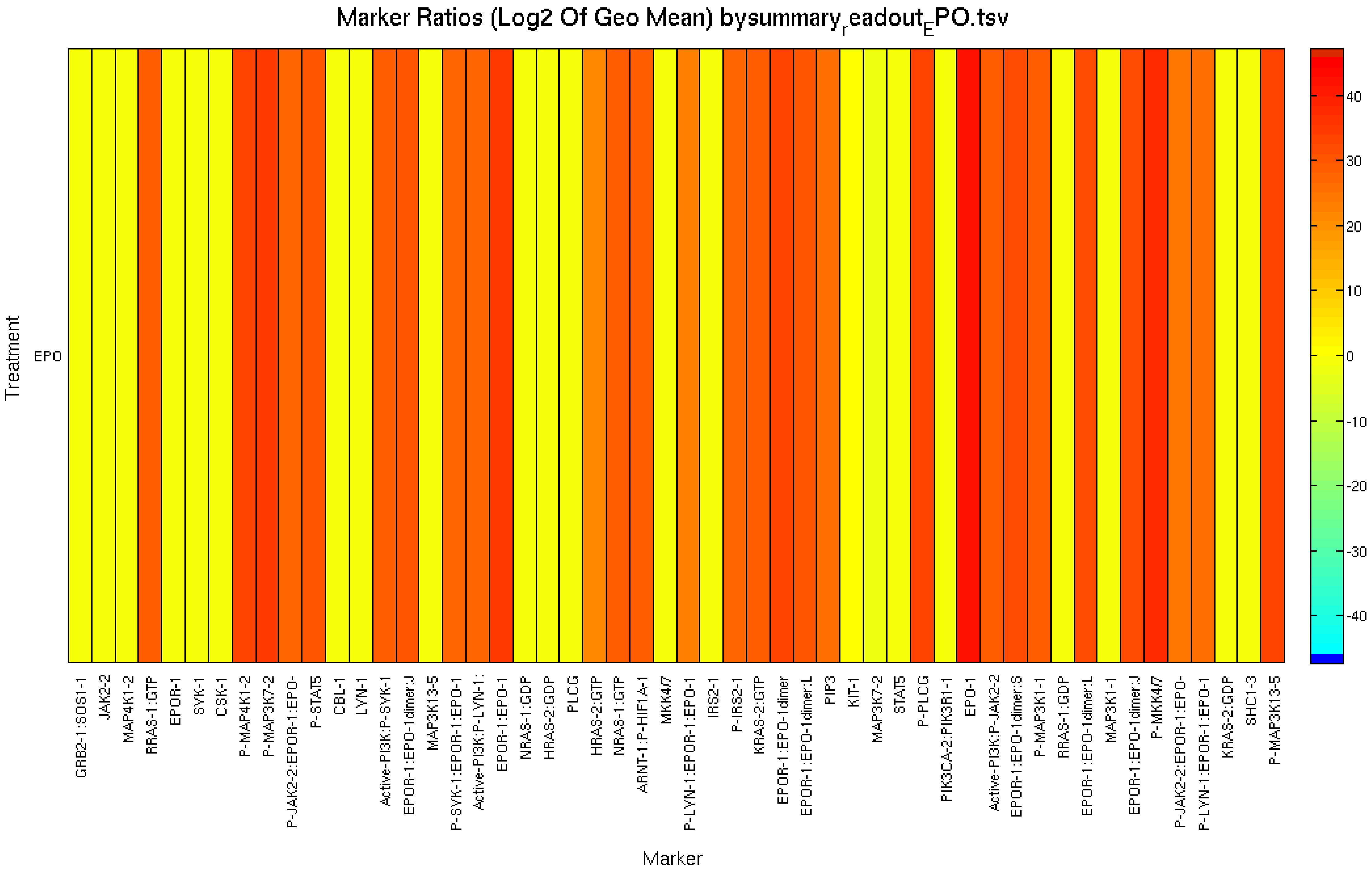


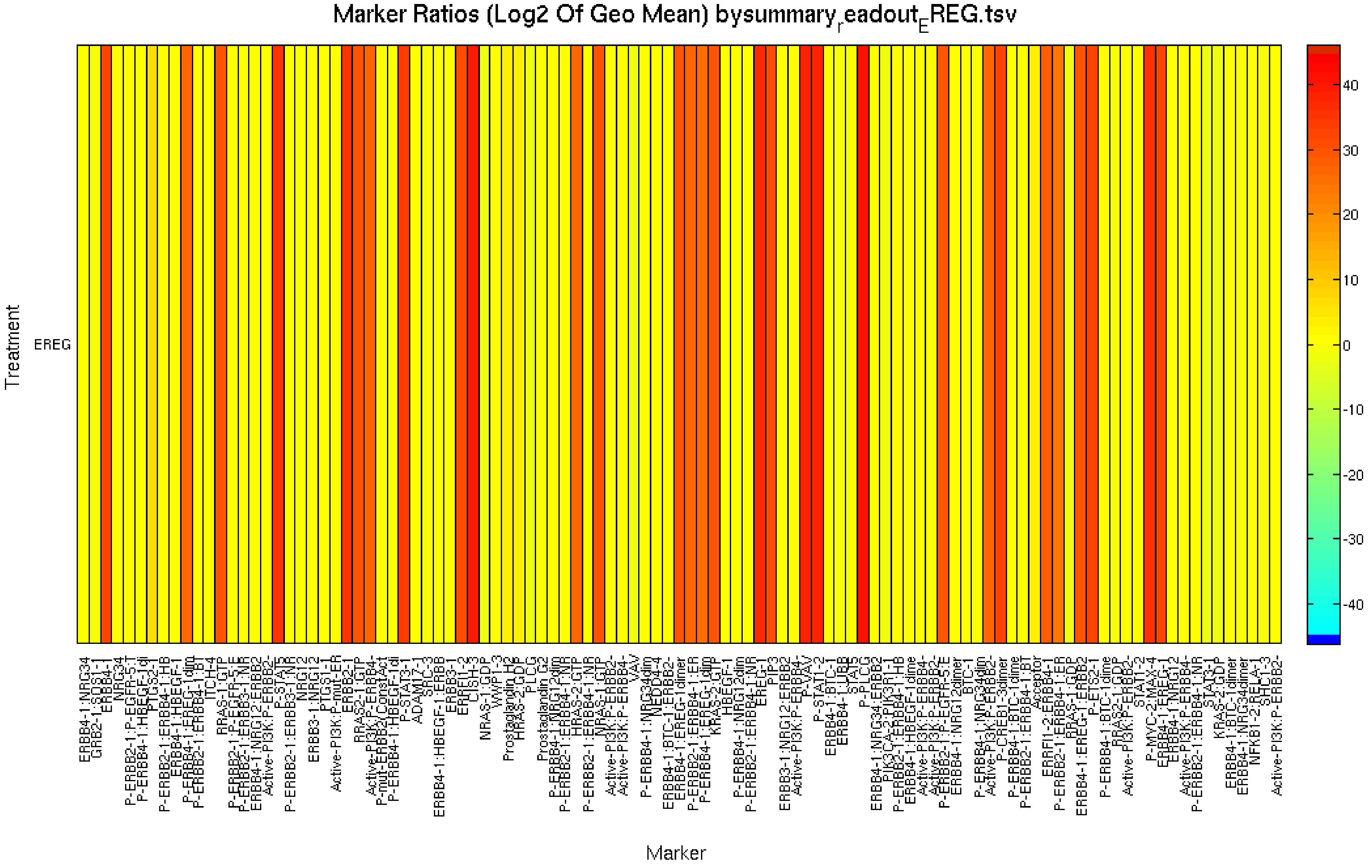
Marker Ratios (Log2 Of Geo Mean) by$summary_readout_EFNB$.tsv



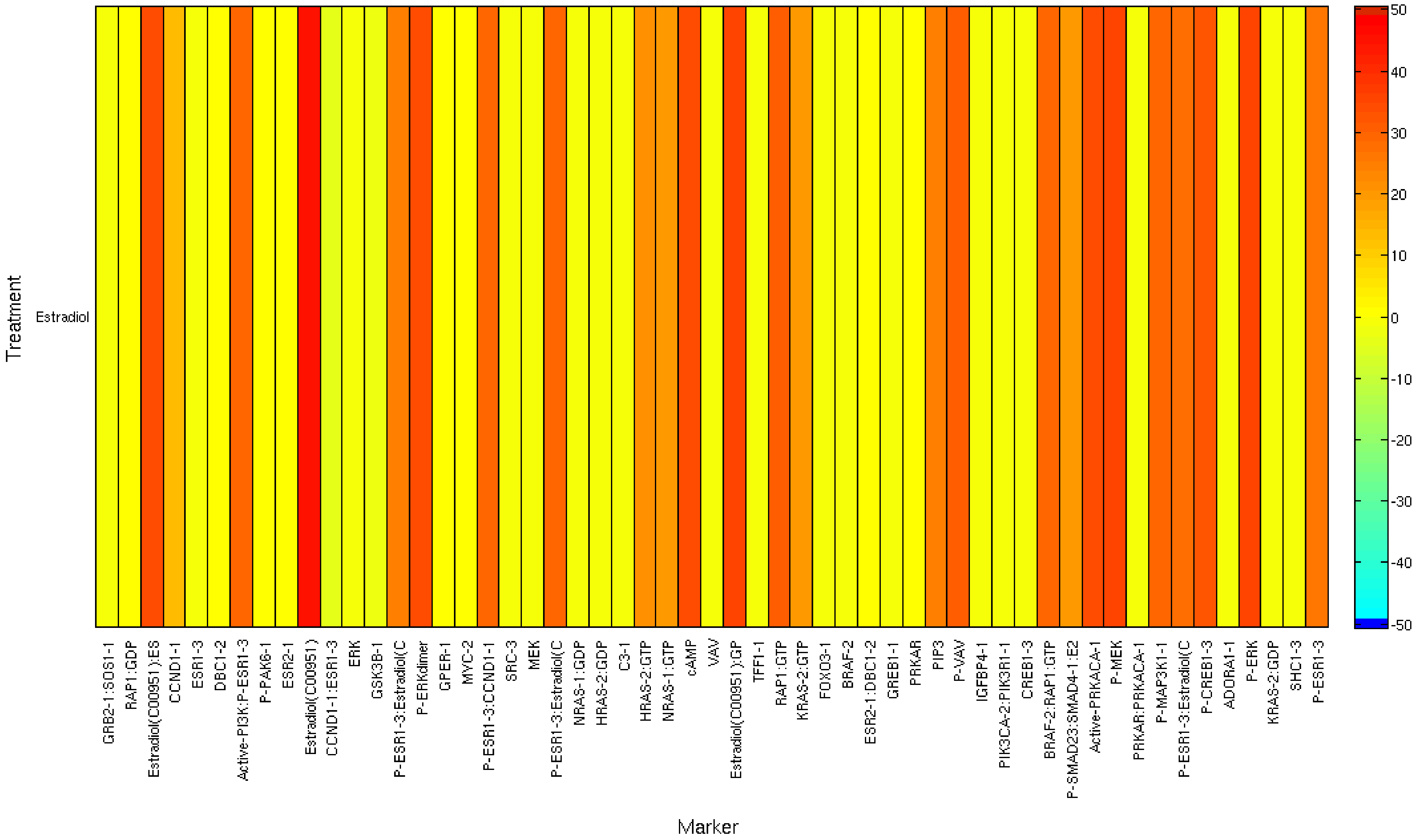


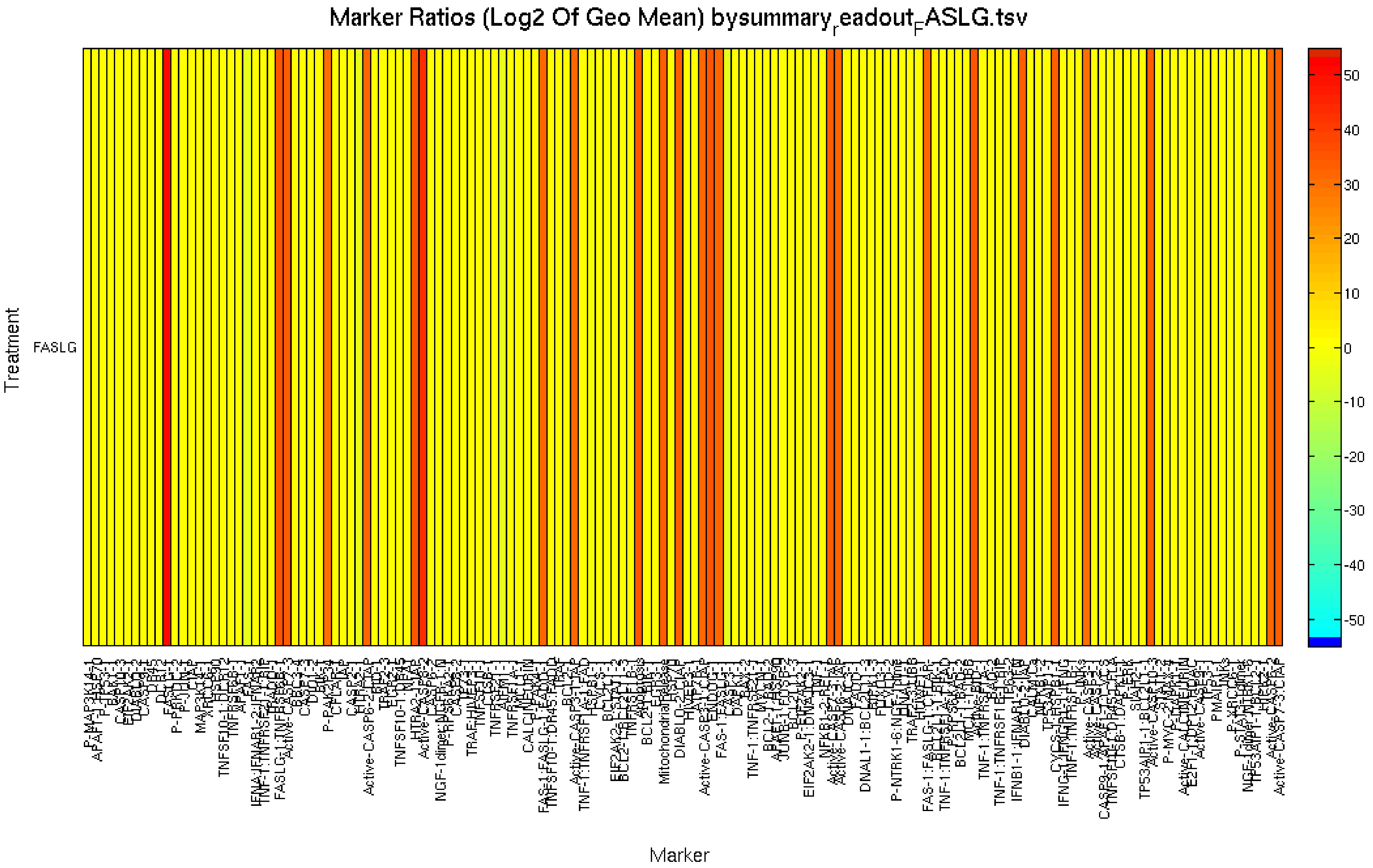
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_E$GF.tsv


Marker Ratios (Log2 Of Geo Mean) bysummary_readout_EPO.tsv
Treatment
EPO
Marker
GRB2-1:SOS1-1
JAK2-2
MAP4K1-2
RRAS-1:GTP
EPOR-1
SYK-1
CSK-1
P-MAP4K1-2
P-MAP3K7-2
P-JAK2-2:EPOR-1:EPO-
P-STAT5
CBL-1
LYN-1
Active-PI3K:P-SYK-1
EPOR-1:EPO-1dimer:J
MAP3K13-5
P-SYK-1:EPOR-1:EPO-1
Active-PI3K:P-LYN-1:
EPOR-1:EPO-1
NRAS-1:GDP
HRAS-2:GDP
PLCG
HRAS-2:GTP
NRAS-1:GTP
ARNT-1:P-HIF1A-1
MKK4/7
P-LYN-1:EPOR-1:EPO-1
IRS2-1
P-IRS2-1
KRAS-2:GTP
EPOR-1:EPO-1dimer
EPOR-1:EPO-1dimer:L
PIP3
KIT-1
MAP3K7-2
STAT5
P-PLCG
PIK3CA-2:PIK3R1-1
EPO-1
Active-PI3K:P-JAK2-2
EPOR-1:EPO-1dimer:S
P-MAP3K1-1
RRAS-1:GDP
EPOR-1:EPO-1dimer:L
MAP3K1-1
EPOR-1:EPO-1dimer:J
P-MKK4/7
P-JAK2-2:EPOR-1:EPO-
P-LYN-1:EPOR-1:EPO-1
KRAS-2:GDP
SHC1-3
P-MAP3K13-5
40
30
20
10
0
-10
-20
-30
-40

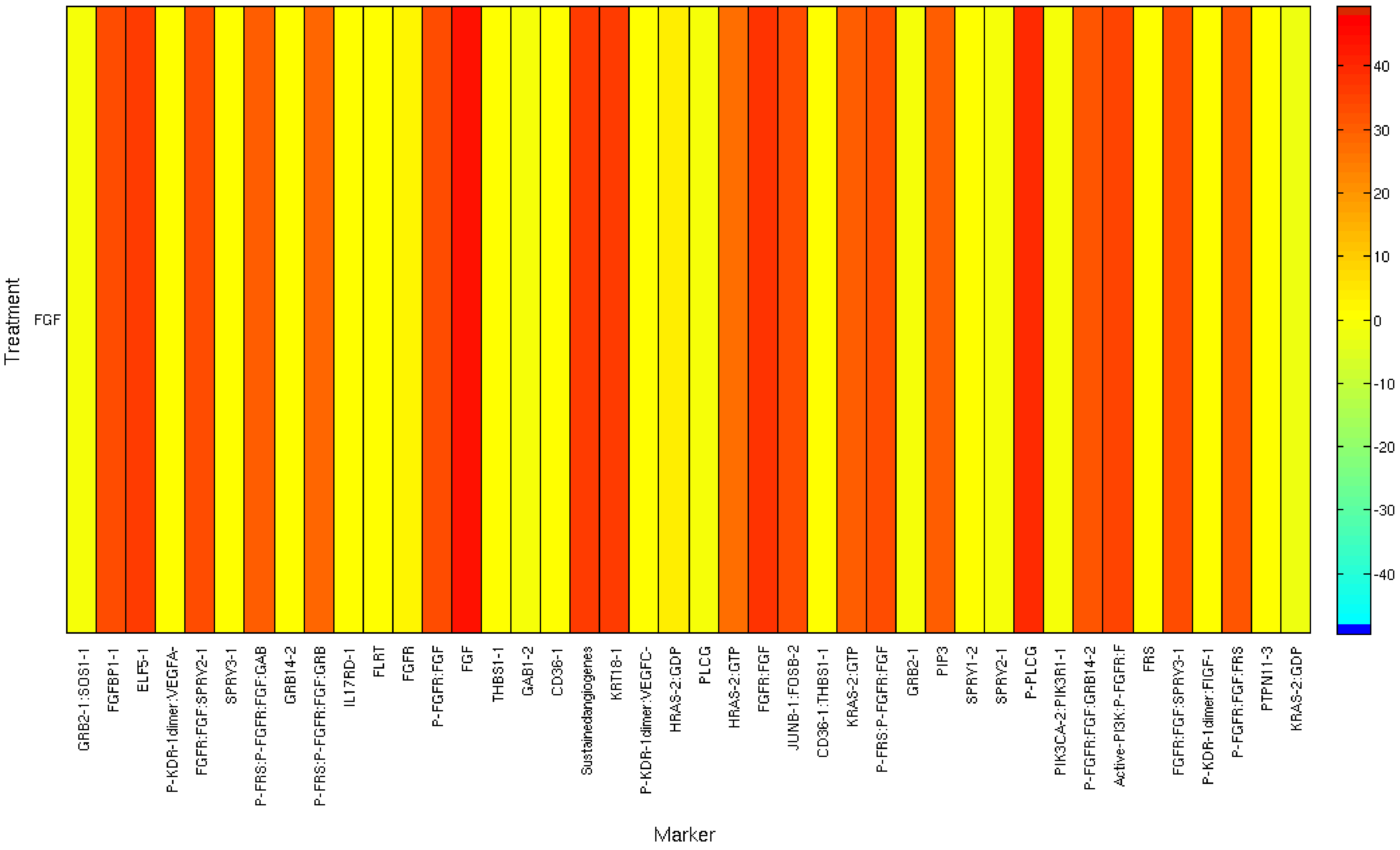

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_EREG.tsv
Treatment
EREG
Marker
40
30
20
10
0
-10
-20
-30
-40
ERBB4-1:NRG34
GRB2-1:SOS1-1
ERBB4-1
NRG34
P-ERBB2-1:P-EGFR-5:T
P-ERBB4-1:HBEGF-1di
PTGS2-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1
P-ERBB4-1:EREG-1dim
P-ERBB2-1:ERBB4-1:BT
ITCH-4
RRAS-1:GTP
P-ERBB2-1:P-EGFR-5:E
P-ERBB2-1:ERBB3-1:NR
ERBB4-1:NRG12:ERBB2
Active-PI3K:P-ERBB2-
P-STAT5
P-ERBB2-1:ERBB3-1:NR
NRG12
ERBB3-1:NRG12
PTGS1-1
Active-PI3K:P-mut-ER
ERBB2-1
RRAS2-1:GTP
Active-PI3K:P-ERBB4-
P-mut-ERBB2(ConstAct
P-ERBB4-1:HBEGF-1di
P-STAT3-1
ADAM17-1
SRC-3
ERBB4-1:HBEGF-1:ERBB
ERBB3-1
ERRFI1-2
CISH-3
NRAS-1:GDP
WWP1-3
Prostaglandin H2
HRAS-2:GDP
PLCG
Prostaglandin G2
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
HRAS-2:GTP
P-ERBB2-1:ERBB4-1:NR
NRAS-1:GTP
Active-PI3K:P-ERBB2-
Active-PI3K:P-ERBB4-
VAV
P-ERBB4-1:NRG34dim
NEDD4-4
ERBB4-1:BTC-1:ERBB2
ERBB4-1:EREG-1dimer
P-ERBB2-1:ERBB4-1:ER
P-ERBB4-1:EREG-1dim
KRAS-2:GTP
HBEGF-1
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
EREG-1
PIP3
ERBB3-1:NRG12:ERBB2
Active-PI3K:P-ERBB4-
P-VAV
P-STAT1-2
ERBB4-1:BTC-1
ERBB4-1:UBB
STAT5
P-PLCG
ERBB4-1:NRG34:ERBB2
PIK3CA-3:PIK3R1-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1dime
Active-PI3K:P-ERBB4-
Active-PI3K:P-ERBB2-
P-ERBB2-1:P-EGFR-5:E
ERBB4-1:NRG12dimer
BTC-1
P-ERBB4-1:NRG34dim
Active-PI3K:P-ERBB2-
P-CREB1-3dimer
P-ERBB4-1:BTC-1dime
P-ERBB2-1:ERBB4-1:BT
Acceptor
ERRFI1-2:ERBB4-1
P-ERBB2-1:ERBB4-1:ER
RRAS-1:GDP
ERBB4-1:EREG-1:ERBB2
P-ETS2-1
P-ERBB4-1:BTC-1dime
RRAS2-1:GDP
Active-PI3K:P-ERBB2-
STAT1-2
P-MYC-2:MAX-4
ERBB4-1:EREG-1
ERBB4-1:NRG12
Active-PI3K:P-ERBB4-
P-ERBB2-1:ERBB4-1:NR
STAT3-1
KRAS-2:GDP
ERBB4-1:BTC-1dimer
ERBB4-1:NRG34dimer
NFKB1-2:RELA-1
SHC1-3
Active-PI3K:P-ERBB2-

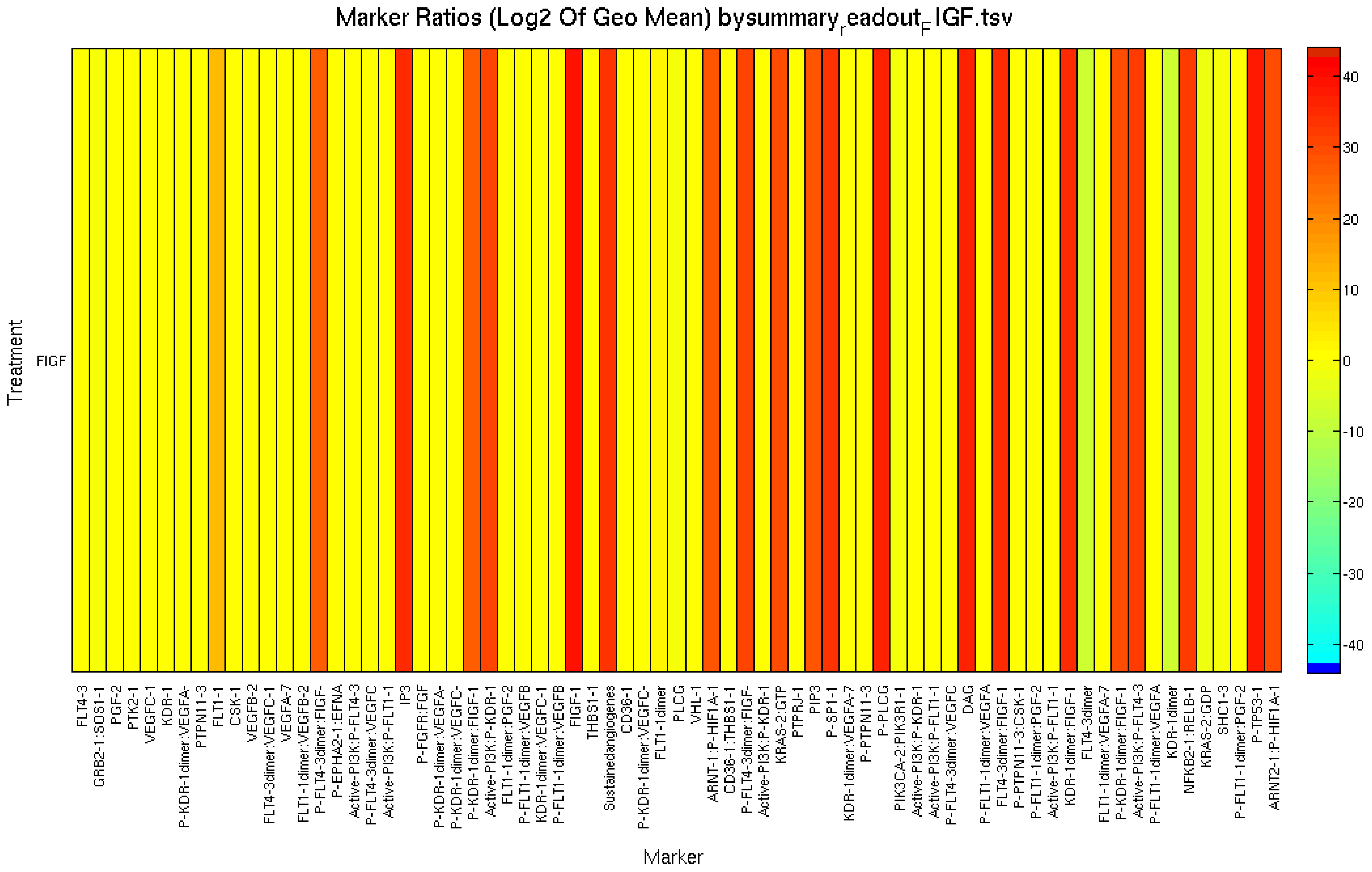
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_E$stradiol$_C$00951.tsv

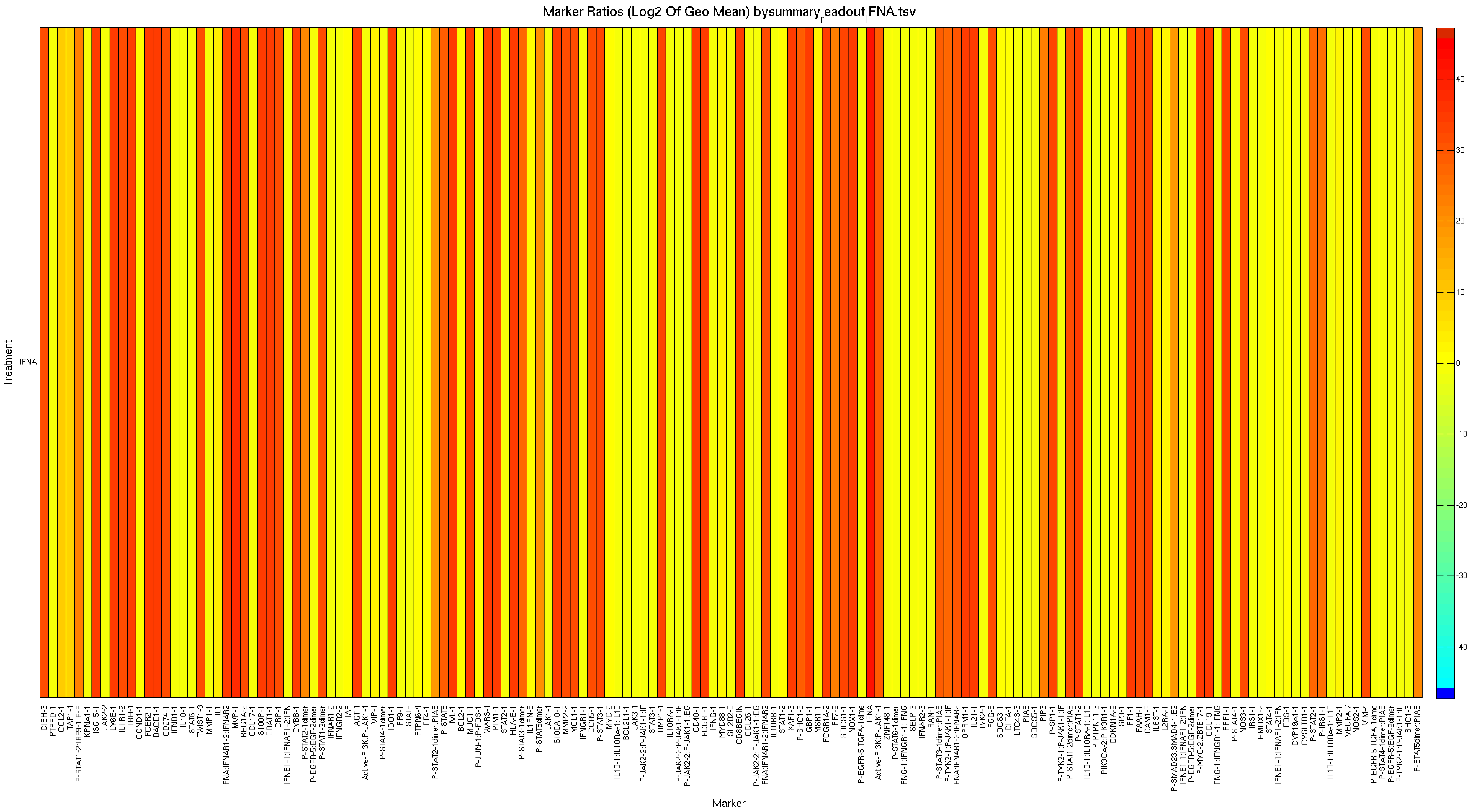


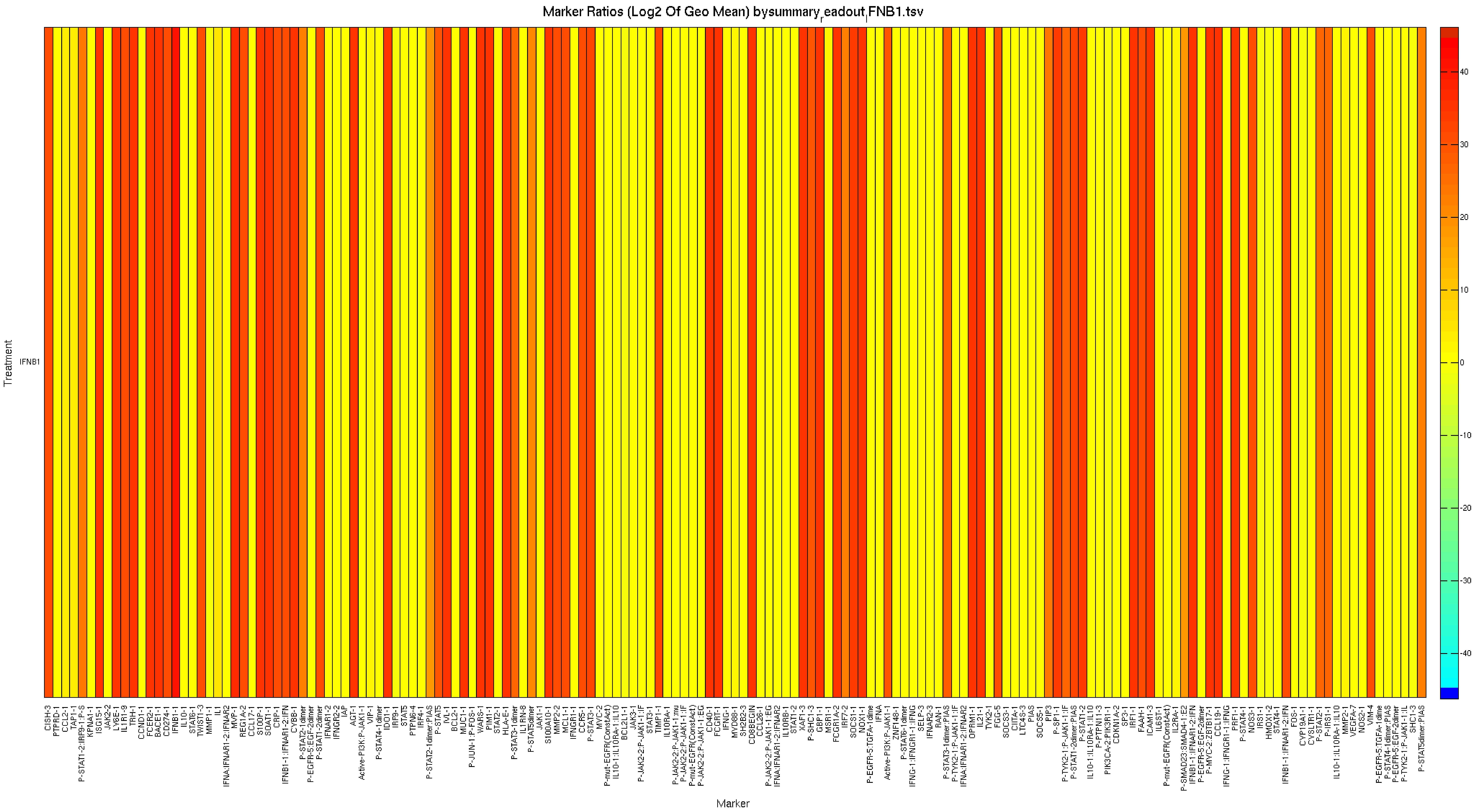

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_FASLG.tsv
Treatment
FASLG
Marker
50
40
30
20
10
0
-10
-20
-30
-40
-50

Marker Ratios (Log2 Of Geo Mean) by$summary_readout_FGF$.tsv

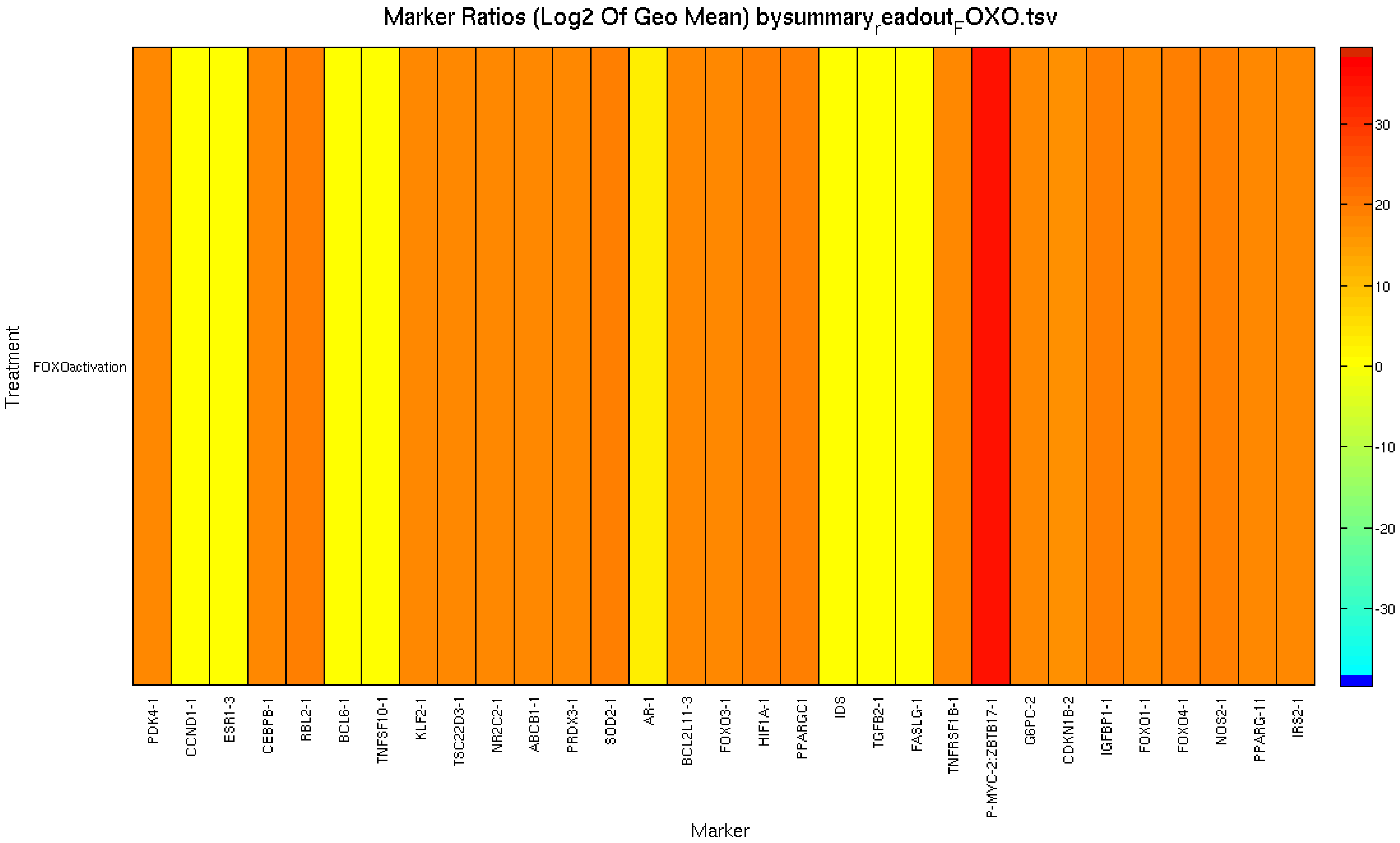


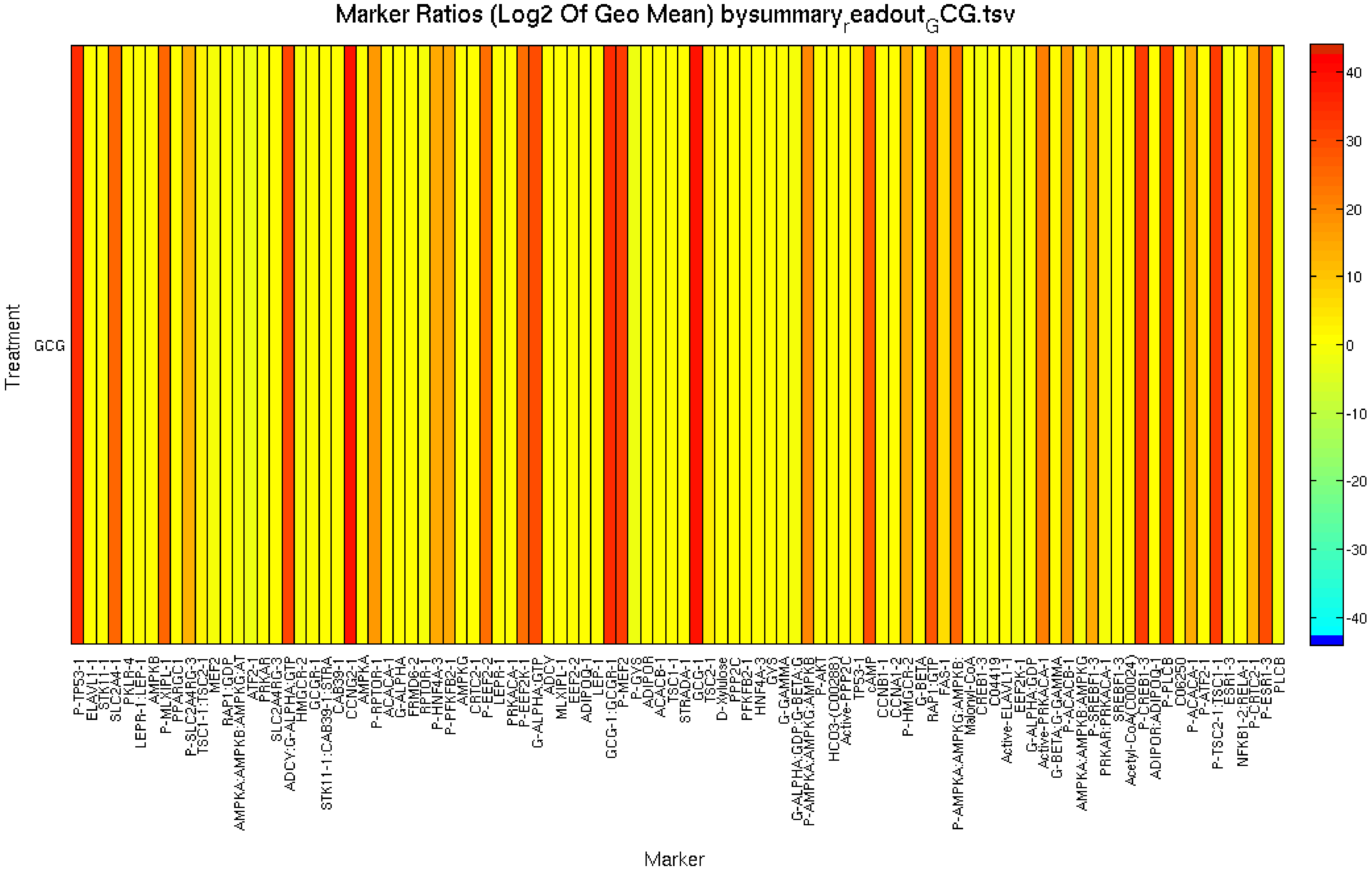

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_F$IGF.tsv
Treatment
FIGF
Marker
FLT4-3
GRB2-1:SOS1-1
PGF-2
PTK2-1
VEGFC-1
KDR-1
P-KDR-1dimer:VEGFA-
PTPN11-3
FLT1-1
CSK-1
VEGFB-2
FLT4-3dimer:VEGFC-1
VEGFA-7
FLT1-1dimer:VEGFB-2
P-FLT4-3dimer:FIGF-
P-EPHA2-1:EFNA
Active-PI3K:P-FLT4-3
P-FLT4-3dimer:VEGFC
Active-PI3K:P-FLT1-1
IP3
P-FGFR:FGF
P-KDR-1dimer:VEGFA-
P-KDR-1dimer:VEGFC-
P-KDR-1dimer:FIGF-1
Active-PI3K:P-KDR-1
FLT1-1dimer:PGF-2
P-FLT1-1dimer:VEGFB
KDR-1dimer:VEGFC-1
P-FLT1-1dimer:VEGFB
FIGF-1
THBS1-1
Sustainedangiogenes
CD36-1
P-KDR-1dimer:VEGFC-
FLT1-1dimer
PLCG
VHL-1
ARNT-1:P-HIF1A-1
CD36-1:THBS1-1
P-FLT4-3dimer:FIGF-
Active-PI3K:P-KDR-1
KRAS-2:GTP
PTPRJ-1
PIP3
P-SP1-1
KDR-1dimer:VEGFA-7
P-PTPN11-3
P-PLCG
PIK3CA-2:PIK3R1-1
Active-PI3K:P-KDR-1
Active-PI3K:P-FLT1-1
P-FLT4-3dimer:VEGFC
DAG
P-FLT1-1dimer:VEGFA
FLT4-3dimer:FIGF-1
P-PTPN11-3:CSK-1
P-FLT1-1dimer:PGF-2
Active-PI3K:P-FLT1-1
KDR-1dimer:FIGF-1
FLT4-3dimer
FLT1-1dimer:VEGFA-7
P-KDR-1dimer:FIGF-1
Active-PI3K:P-FLT4-3
P-FLT1-1dimer:VEGFA
KDR-1dimer
NFKB2-1:RELB-1
KRAS-2:GDP
SHC1-3
P-FLT1-1dimer:PGF-2
P-TP53-1
ARNT2-1:P-HIF1A-1
40
30
20
10
0
-10
-20
-30
-40

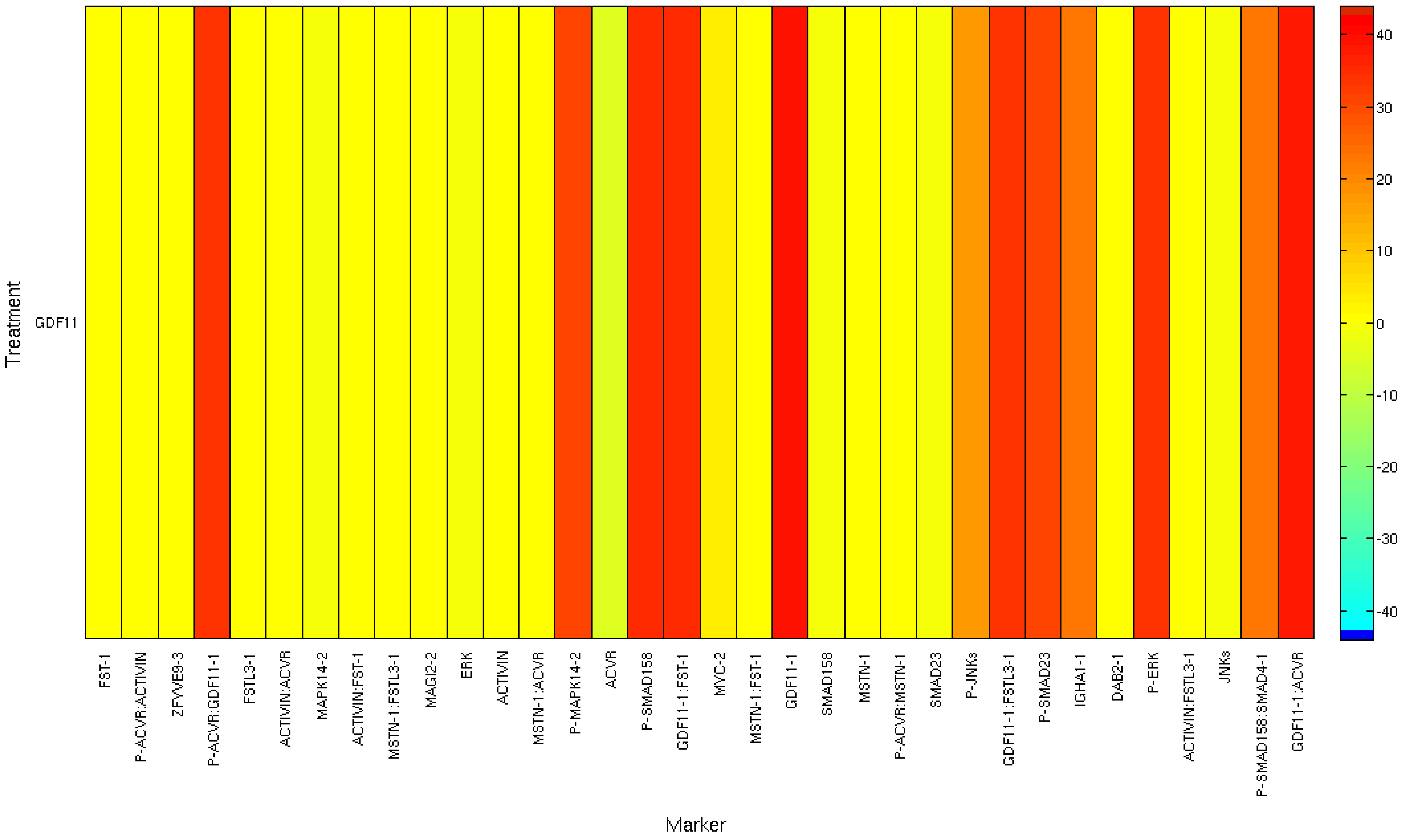

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_IFNA.tsv
Treatment
IFNA
Marker
40
30
20
10
0
-10
-20
-30
-40
CISH-3
PTPRD-1
CCL2-1
TAP1-1
P-STAT1-2:IRF9-1:P-S
KPNA1-1
ISG15-1
JAK2-2
LY6E-1
IL1R1-9
TRH-1
CCND1-1
FCER2-1
BACE1-1
CD274-1
IFNB1-1
IL10-1
STAT6-1
TWIST1-3
MMP1-1
IL1
IFNA:IFNAR1-2:IFNAR2
MVP-1
REG1A-2
CCL17-1
S100P-1
SOAT1-1
CRP-1
IFNB1-1:IFNAR1-2:IFN
CYBB-1
P-STAT2-1dimer
P-EGFR-5:EGF-2dimer
P-STAT1-2dimer
IFNAR1-2
IFNGR2-2
IAP
AGT-1
Active-PI3K:P-JAK1-1
VIP-1
P-STAT4-1dimer
IDO1-1
IRF9-1
STAT5
PTPN6-4
IRF4-1
P-STAT2-1dimer:PIAS
P-STAT5
IVL-1
BCL2-1
MUC1-1
P-JUN-1:P-FOS-1
WARS-1
PIM1-1
STAT2-1
HLA-E-1
P-STAT3-1dimer
IL1RN-8
P-STAT5dimer
JAK1-1
S100A10-1
MMP2-2
MCL1-1
IFNGR1-1
CCR5-1
P-STAT3-1
MYC-2
IL10-1:IL10RA-1:IL10
BCL2L1-1
JAK3-1
P-JAK2-2:P-JAK1-1:IF
STAT3-1
TIMP1-1
IL10RA-1
P-JAK2-2:P-JAK1-1:IF
P-JAK2-2:P-JAK1-1:EG
CD40-1
FCGRT-1
IFNG-1
MYD88-1
SH2B2-3
CD8BEGIN
CCL26-1
P-JAK2-2:P-JAK1-1:EG
IFNA:IFNAR1-2:IFNAR2
IL10RB-1
STAT1-2
XAF1-3
P-SHC1-3
GBP1-1
MSR1-1
FCGR1A-2
IRF7-2
SOCS1-1
NOX1-1
P-EGFR-5:TGFA-1dime
IFNA
Active-PI3K:P-JAK1-1
ZNF148-1
P-STAT6-1dimer
IFNG-1:IFNGR1-1:IFNG
SELP-3
IFNAR2-3
RAN-1
P-STAT3-1dimer:PIAS
P-TYK2-1:P-JAK1-1:IF
IFNA:IFNAR1-2:IFNAR2
OPRM1-1
IL21-1
TYK2-1
FGG-5
SOCS3-1
CIITA-1
LTC4S-3
PIAS
SOCS5-1
PIP3
P-SP1-1
P-TYK2-1:P-JAK1-1:IF
P-STAT1-2dimer:PIAS
P-STAT1-2
IL10-1:IL10RA-1:IL10
P-PTPN11-3
PIK3CA-2:PIK3R1-1
CDKN1A-2
SP3-1
IRF1-1
FAAH-1
ICAM1-3
IL6ST-1
IL2RA-1
P-SMAD23:SMAD4-1:E2
IFNB1-1:IFNAR1-2:IFN
P-EGFR-5:EGF-2dimer
P-MYC-2:ZBTB17-1
CCL19-1
IFNG-1:IFNGR1-1:IFNG
PRF1-1
P-STAT4-1
NOS3-1
IRS1-1
HMOX1-2
STAT4-1
IFNB1-1:IFNAR1-2:IFN
FOS-1
CYP19A1-1
CYSLTR1-1
P-STAT2-1
P-IRS1-1
IL10-1:IL10RA-1:IL10
MMP2-1
VEGFA-7
NOS2-1
VIM-4
P-EGFR-5:TGFA-1dime
P-STAT4-1dimer:PIAS
P-EGFR-5:EGF-2dimer
P-TYK2-1:P-JAK1-1:IL
SHC1-3
P-STAT5dimer:PIAS


Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_I$FNB1.tsv
Treatment
IFNB1
Marker
CISH-3
PTPRD-1
CCL2-1
TAP1-1
P-STAT1-2:IRF9-1:P-S
KPNA1-1
ISG15-1
JAK2-2
LY6E-1
IL1R1-9
TRH-1
CCND1-1
FCER2-1
BACE1-1
CD274-1
IFNB1-1
IL10-1
STAT6-1
TWIST1-3
MMP1-1
IL1
IFNA:IFNAR1-2:IFNAR2
MVP-1
REG1A-2
CCL17-1
S100P-1
SOAT1-1
CRP-1
IFNB1-1:IFNAR1-2:IFN
CYBB-1
P-STAT2-1dimer
P-EGFR-5:EGF-2dimer
P-STAT1-2dimer
IFNAR1-2
IFNGR2-2
IAP
AGT-1
Active-PI3K:P-JAK1-1
VIP-1
P-STAT4-1dimer
IDO1-1
IRF9-1
STAT5
PTPN6-4
IRF4-1
P-STAT2-1dimer:PIAS
P-STAT5
IVL-1
BCL2-1
MUC1-1
P-JUN-1:P-FOS-1
WARS-1
PIM1-1
STAT2-1
HLA-E-1
P-STAT3-1dimer
IL1RN-8
P-STAT5dimer
JAK1-1
S100A10-1
MMP2-2
MCL1-1
IFNGR1-1
CCR5-1
P-STAT3-1
MYC-2
P-mut-EGFR(ConstAct)
IL10-1:IL10RA-1:IL10
BCL2L1-1
JAK3-1
P-JAK2-2:P-JAK1-1:IF
STAT3-1
TIMP1-1
IL10RA-1
P-JAK2-2:P-JAK1-1:mu
P-JAK2-2:P-JAK1-1:IF
P-mut-EGFR(ConstAct)
P-JAK2-2:P-JAK1-1:EG
CD40-1
FCGRT-1
IFNG-1
MYD88-1
SH2B2-3
CD8BEGIN
CCL26-1
P-JAK2-2:P-JAK1-1:EG
IFNA:IFNAR1-2:IFNAR2
IL10RB-1
STAT1-2
XAF1-3
P-SHC1-3
GBP1-1
MSR1-1
FCGR1A-2
IRF7-2
SOCS1-1
NOX1-1
P-EGFR-5:TGFA-1dime
IFNA
Active-PI3K:P-JAK1-1
ZNF148-1
P-STAT6-1dimer
IFNG-1:IFNGR1-1:IFNG
SELP-3
IFNAR2-3
RAN-1
P-STAT3-1dimer:PIAS
P-TYK2-1:P-JAK1-1:IF
IFNA:IFNAR1-2:IFNAR2
OPRM1-1
IL21-1
TYK2-1
FGG-5
SOCS3-1
CIITA-1
LTC4S-3
PIAS
SOCS5-1
PIP3
P-SP1-1
P-TYK2-1:P-JAK1-1:IF
P-STAT1-2dimer:PIAS
P-STAT1-2
IL10-1:IL10RA-1:IL10
P-PTPN11-3
PIK3CA-2:PIK3R1-1
CDKN1A-2
SP3-1
IRF1-1
FAAH-1
ICAM1-3
IL6ST-1
P-mut-EGFR(ConstAct)
IL2RA-1
P-SMAD23:SMAD4-1:E2
IFNB1-1:IFNAR1-2:IFN
P-EGFR-5:EGF-2dimer
P-MYC-2:ZBTB17-1
CCL19-1
IFNG-1:IFNGR1-1:IFNG
PRF1-1
P-STAT4-1
NOS3-1
IRS1-1
HMOX1-2
STAT4-1
IFNB1-1:IFNAR1-2:IFN
FOS-1
CYP19A1-1
CYSLTR1-1
P-STAT2-1
P-IRS1-1
IL10-1:IL10RA-1:IL10
MMP2-1
VEGFA-7
NOS2-1
VIM-4
P-EGFR-5:TGFA-1dime
P-STAT4-1dimer:PIAS
P-EGFR-5:EGF-2dimer
P-TYK2-1:P-JAK1-1:IL
SHC1-3
P-STAT5dimer:PIAS
40
30
20
10
0
-10
-20
-30
-40

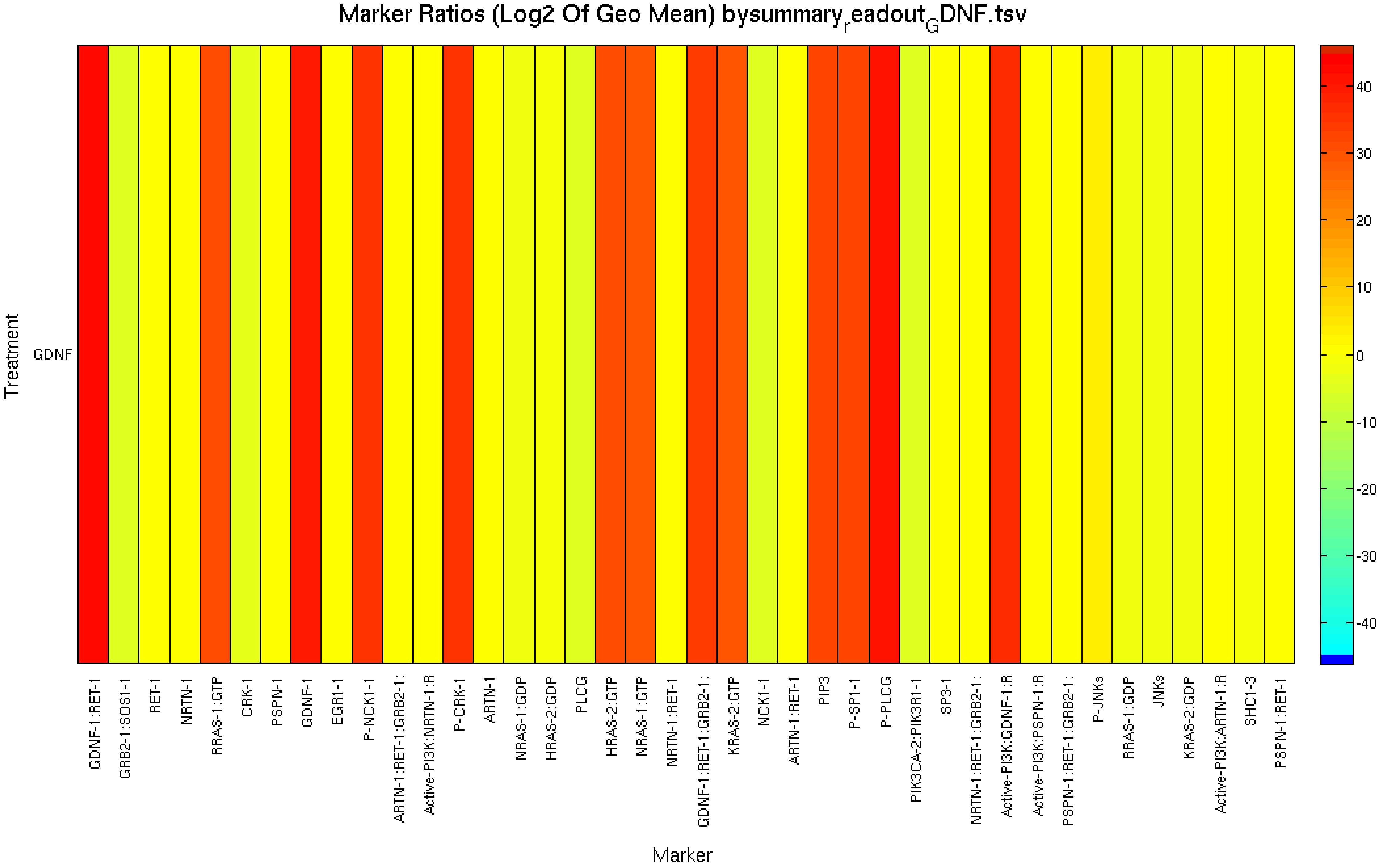

Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{I}$FNG.tsv
Treatment
IFNG
Marker
CISH-3
PTPRD-1
CCL2-1
TAP1-1
P-STAT1-2:IRF9-1:P-S
KPNA1-1
ISG15-1
JAK2-2
LY6E-1
IL1R1-9
TRH-1
CCND1-1
FCER2-1
BACE1-1
CD274-1
IFNB1-1
IL10-1
STAT6-1
TWIST1-3
MMP1-1
IL1
IFNA:IFNAR1-2:IFNAR2
MVP-1
REG1A-2
CCL17-1
S100P-1
SOAT1-1
CRP-1
IFNB1-1:IFNAR1-2:IFN
CYBB-1
P-STAT2-1dimer
P-EGFR-5:EGF-2dimer
P-STAT1-2dimer
IFNAR1-2
IFNGR2-2
IAP
AGT-1
Active-PI3K:P-JAK1-1
VIP-1
P-STAT4-1dimer
IDO1-1
IRF9-1
STAT5
PTPN6-4
IRF4-1
P-STAT2-1dimer:PIAS
P-STAT5
IVL-1
BCL2-1
MUC1-1
P-JUN-1:P-FOS-1
WARS-1
PIM1-1
STAT2-1
HLA-E-1
P-STAT3-1dimer
IL1RN-8
P-STAT5dimer
JAK1-1
S100A10-1
MMP2-2
MCL1-1
IFNGR1-1
CCR5-1
P-STAT3-1
MYC-2
P-mut-EGFR(ConstAct)
IL10-1:IL10RA-1:IL10
BCL2L1-1
JAK3-1
P-JAK2-2:P-JAK1-1:IF
STAT3-1
TIMP1-1
IL10RA-1
P-JAK2-2:P-JAK1-1:mu
P-JAK2-2:P-JAK1-1:IF
P-mut-EGFR(ConstAct)
P-JAK2-2:P-JAK1-1:EG
CD40-1
FCGRT-1
IFNG-1
MYD88-1
SH2B2-3
CD8BEGIN
CCL26-1
P-JAK2-2:P-JAK1-1:EG
IFNA:IFNAR1-2:IFNAR2
IL10RB-1
STAT1-2
XAF1-3
P-SHC1-3
GBP1-1
MSR1-1
FCGR1A-2
IRF7-2
SOCS1-1
NOX1-1
P-EGFR-5:TGFA-1dime
IFNA
Active-PI3K:P-JAK1-1
ZNF148-1
P-STAT6-1dimer
IFNG-1:IFNGR1-1:IFNG
SELP-3
IFNAR2-3
RAN-1
P-STAT3-1dimer:PIAS
P-TYK2-1:P-JAK1-1:IF
IFNA:IFNAR1-2:IFNAR2
OPRM1-1
IL21-1
TYK2-1
FGG-5
SOCS3-1
CIITA-1
LTC4S-3
PIAS
SOCS5-1
PIP3
P-SP1-1
P-TYK2-1:P-JAK1-1:IF
P-STAT1-2dimer:PIAS
P-STAT1-2
IL10-1:IL10RA-1:IL10
P-PTPN11-3
PIK3CA-2:PIK3R1-1
CDKN1A-2
SP3-1
IRF1-1
FAAH-1
ICAM1-3
IL6ST-1
P-mut-EGFR(ConstAct)
IL2RA-1
P-SMAD23:SMAD4-1:E2
IFNB1-1:IFNAR1-2:IFN
P-EGFR-5:EGF-2dimer
P-MYC-2:ZBTB17-1
CCL19-1
IFNG-1:IFNGR1-1:IFNG
PRF1-1
P-STAT4-1
NOS3-1
IRS1-1
HMOX1-2
STAT4-1
IFNB1-1:IFNAR1-2:IFN
FOS-1
CYP19A1-1
CYSLTR1-1
P-STAT2-1
P-IRS1-1
IL10-1:IL10RA-1:IL10
MMP2-1
VEGFA-7
NOS2-1
VIM-4
P-EGFR-5:TGFA-1dime
P-STAT4-1dimer:PIAS
P-EGFR-5:EGF-2dimer
P-TYK2-1:P-JAK1-1:IL
SHC1-3
P-STAT5dimer:PIAS
40
30
20
10
0
-10
-20
-30
-40


Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_F$OXO.tsv
Treatment
FOXOactivation
PDK4-1
CCND1-1
ESR1-3
CEBPB-1
RBL2-1
BCL6-1
TNFSF10-1
KLF2-1
TSC22D3-1
NR2C2-1
ABCB1-1
PRDX3-1
SOD2-1
AR-1
BCL2L11-3
FOXO3-1
HIF1A-1
PPARGC1
IDS
TGFB2-1
FASLG-1
TNFRSF1B-1
P-MYC-2:ZBTB17-1
G6PC-2
CDKN1B-2
IGFBP1-1
FOXO1-1
FOXO4-1
NOS2-1
PPARG-11
IRS2-1
Marker
30
20
10
0
-10
-20
-30


Marker Ratios (Log2 Of Geo Mean) bysummary_readout_GCG.tsv
Treatment
GCG
Marker
40
30
20
10
0
-10
-20
-30
-40
P-TP53-1
ELAVL1-1
STK11-1
SLC2A4-1
PKLR-4
LEPR-1:LEP-1
AMPKB
P-MLXIPL-1
PPARGC1
P-SLC2A4RG-3
TSC1-1:TSC2-1
MEF2
RAP1:GDP
AMPKA:AMPKB:AMPKG:AT
ATF2-1
PRKAR
SLC2A4RG-3
ADCY:G-ALPHA:GTP
HMGCR-2
GCGR-1
STK11-1:CAB39-1:STRA
CAB39-1
CCNG2-1
AMPKA
P-RPTOR-1
ACACA-1
G-ALPHA
FRMD6-2
RPTOR-1
P-HNF4A-3
P-PFKFB2-1
AMPKG
CRTC2-1
P-EEF2-2
LEPR-1
PRKACA-1
P-EEF2K-1
G-ALPHA:GTP
ADCY
MLXIPL-1
EEF2-2
ADIPOQ-1
LEP-1
GCG-1:GCGR-1
P-MEF2
P-GYS
ADIPOR
ACACB-1
TSC1-1
STRADA-1
GCG-1
TSC2-1
D-Xylulose
PPP2C
PFKFB2-1
HNF4A-3
GYS
G-GAMMA
G-ALPHA:GDP:G-BETA:G
P-AMPKA:AMPKG:AMPKB
P-AKT
HCO3-(C00288)
Active-PPP2C
TP53-1
cAMP
CCNB1-1
CCNA1-2
P-HMGCR-2
G-BETA
RAP1:GTP
FAS-1
P-AMPKA:AMPKG:AMPKB:
Malonyl-CoA
CREB1-3
C04419
Active-ELAVL1-1
EEF2K-1
G-ALPHA:GDP
Active-PRKACA-1
G-BETA:G-GAMMA
P-ACACB-1
AMPKA:AMPKB:AMPKG
P-SREBF1-3
PRKAR:PRKACA-1
SREBF1-3
Acetyl-CoA(C00024)
P-CREB1-3
ADIPOR:ADIPOQ-1
P-PLCB
C06250
P-ACACA-1
P-ATF2-1
P-TSC2-1:TSC1-1
ESR1-1
NFKB1-2:RELA-1
P-CRTC2-1
P-ESR1-3
PLCB

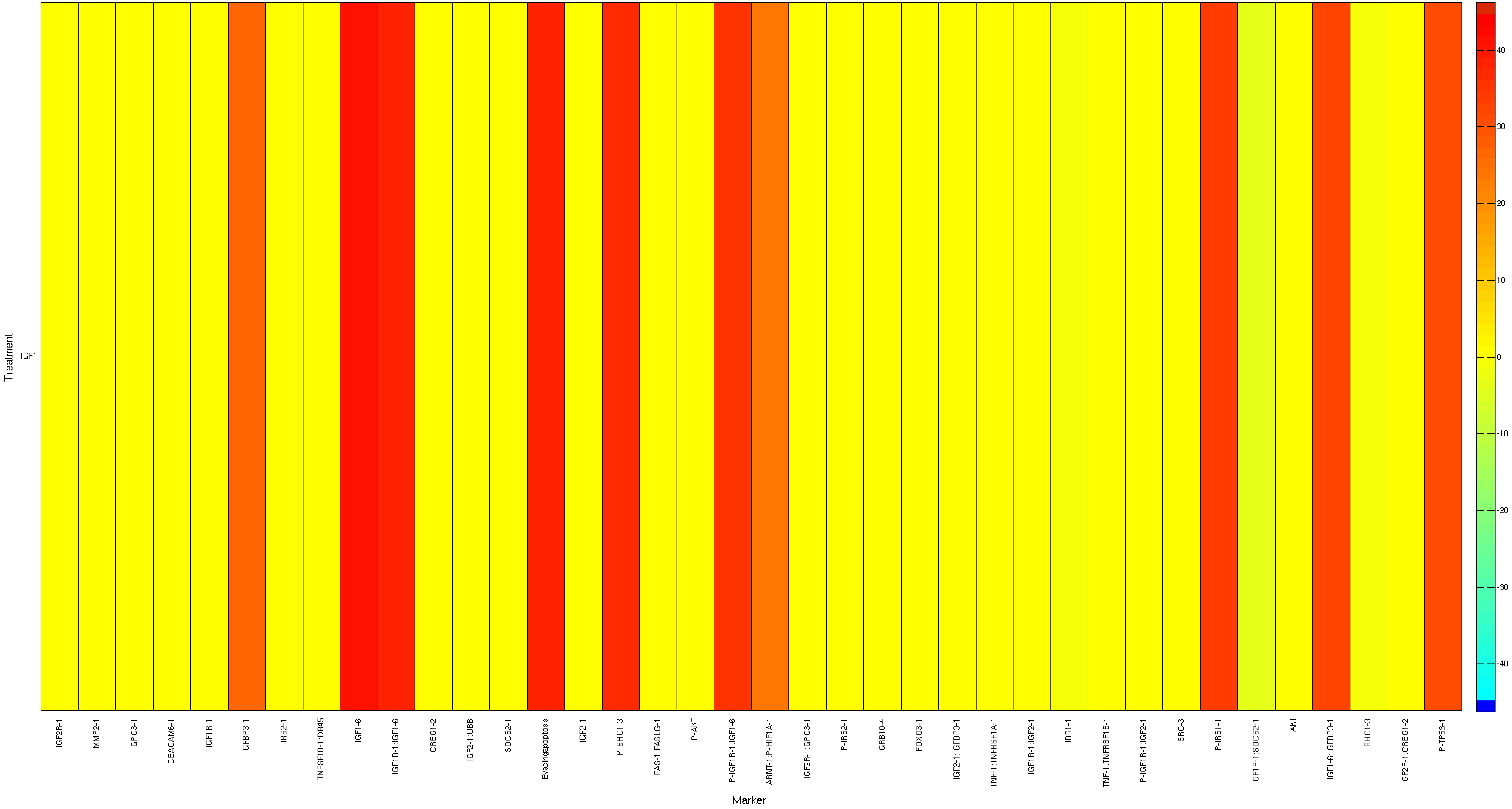


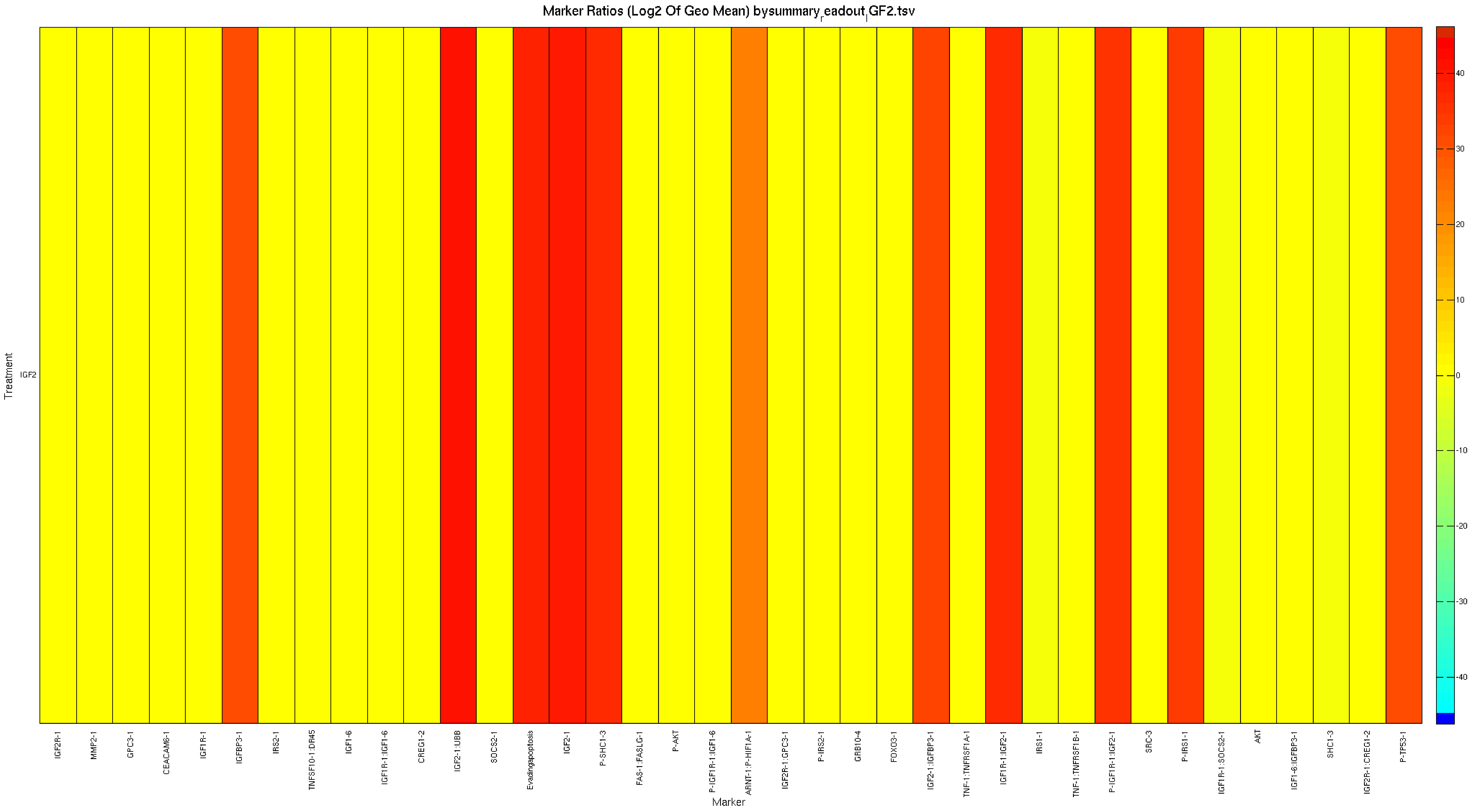
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_G$DF11.tsv



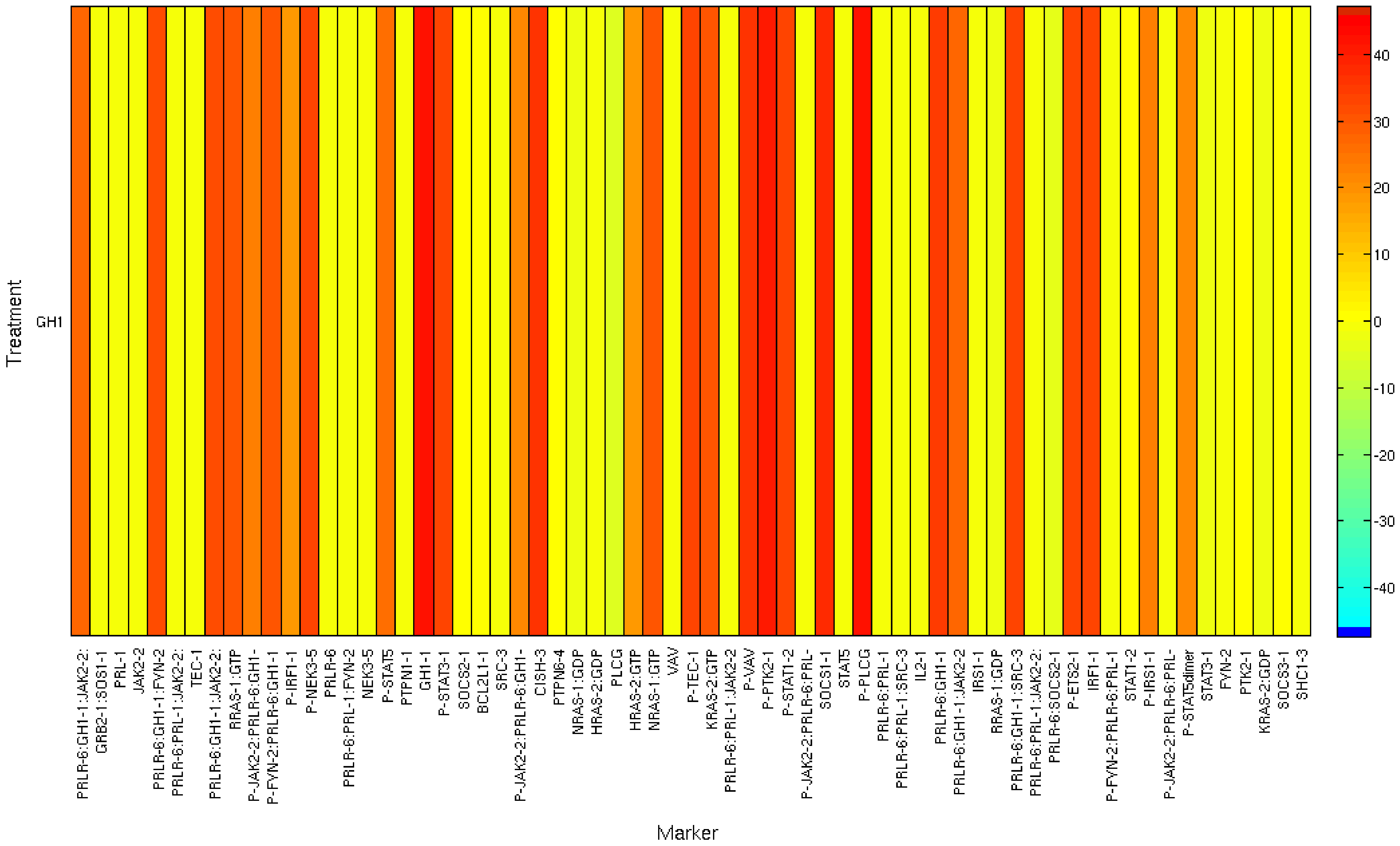
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_G$DNF.tsv
Treatment
GDNF
Marker
GDNF-1:RET-1
GRB2-1:SOS1-1
RET-1
NRTN-1
RRAS-1:GTP
CRK-1
PSPN-1
GDNF-1
EGR1-1
P-NCK1-1
ARTN-1:RET-1:GRB2-1:
Active-PI3K:NRTN-1:R
P-CRK-1
ARTN-1
NRAS-1:GDP
HRAS-2:GDP
PLCG
HRAS-2:GTP
NRAS-1:GTP
NRTN-1:RET-1
GDNF-1:RET-1:GRB2-1:
KRAS-2:GTP
NCK1-1
ARTN-1:RET-1
PIP3
P-SP1-1
P-PLCG
PIK3CA-2:PIK3R1-1
SP3-1
NRTN-1:RET-1:GRB2-1:
Active-PI3K:GDNF-1:R
Active-PI3K:PSPN-1:R
PSPN-1:RET-1:GRB2-1:
P-JNKs
RRAS-1:GDP
JNKs
KRAS-2:GDP
Active-PI3K:ARTN-1:R
SHC1-3
PSPN-1:RET-1
40
30
20
10
0
-10
-20
-30
-40

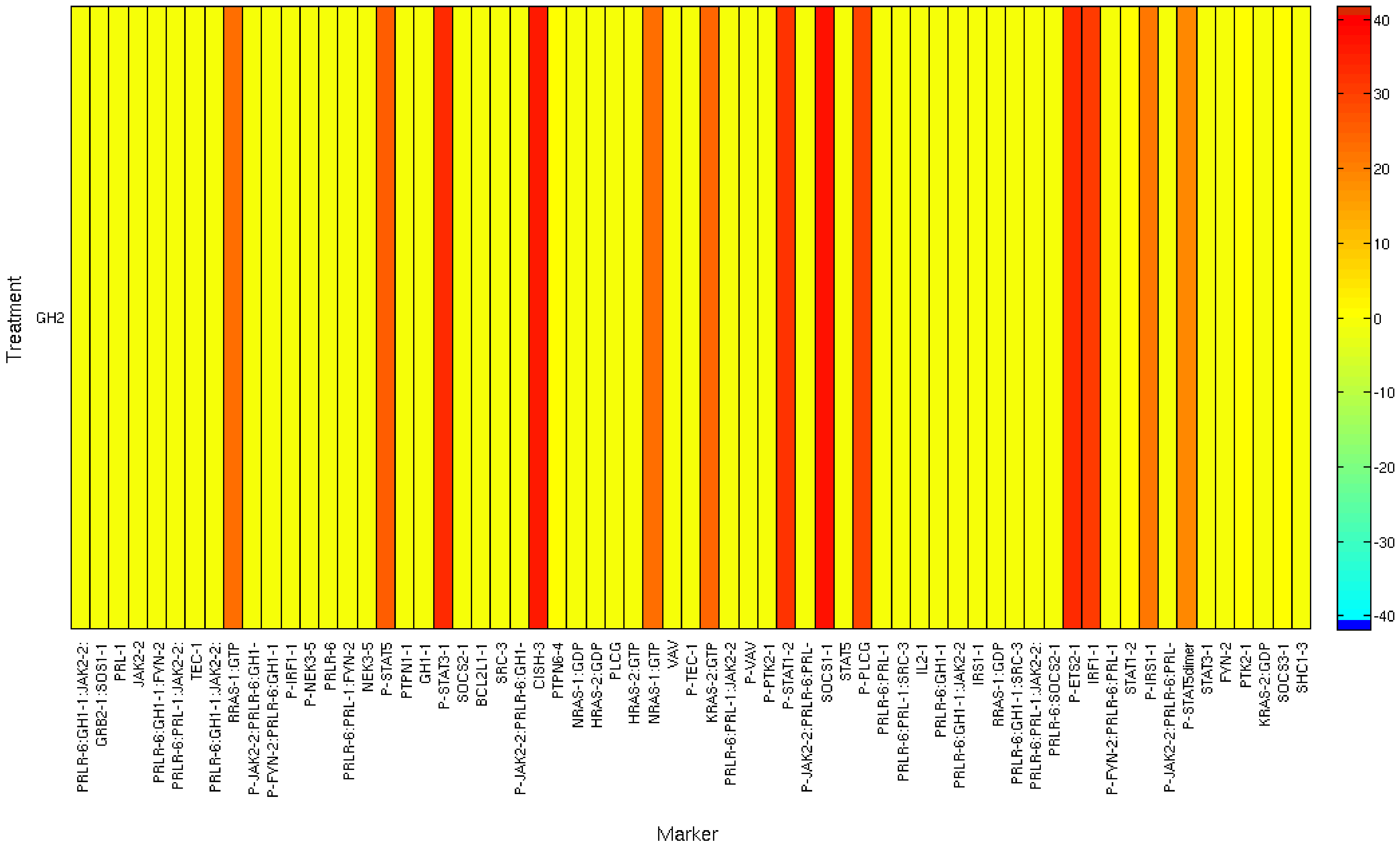
Marker Ratios (Log2 Of Geo Mean) bysummary_readout_IGF1.tsv




Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_I$GF2.tsv
Treatment
IGF2
IGF2R-1
MMP2-1
GPC3-1
CEACAM6-1
IGF1R-1
IGFBP3-1
IRS2-1
TNFSF10-1:DR45
IGF1-6
IGF1R-1:IGF1-6
CREG1-2
IGF2-1:UBB
SOCS2-1
Evadingapoptosis
IGF2-1
P-SHC1-3
FAS-1:FASLG-1
P-AKT
P-IGF1R-1:IGF1-6
ARNT-1:P-HIF1A-1
IGF2R-1:GPC3-1
P-IRS2-1
GRB10-4
FOXO3-1
IGF2-1:IGFBP3-1
TNF-1:TNFRSF1A-1
IGF1R-1:IGF2-1
IRS1-1
TNF-1:TNFRSF1B-1
P-IGF1R-1:IGF2-1
SRC-3
P-IRS1-1
IGF1R-1:SOCS2-1
AKT
IGF1-6:IGFBP3-1
SHC1-3
IGF2R-1:CREG1-2
P-TP53-1
Marker
40
30
20
10
0
-10
-20
-30
-40

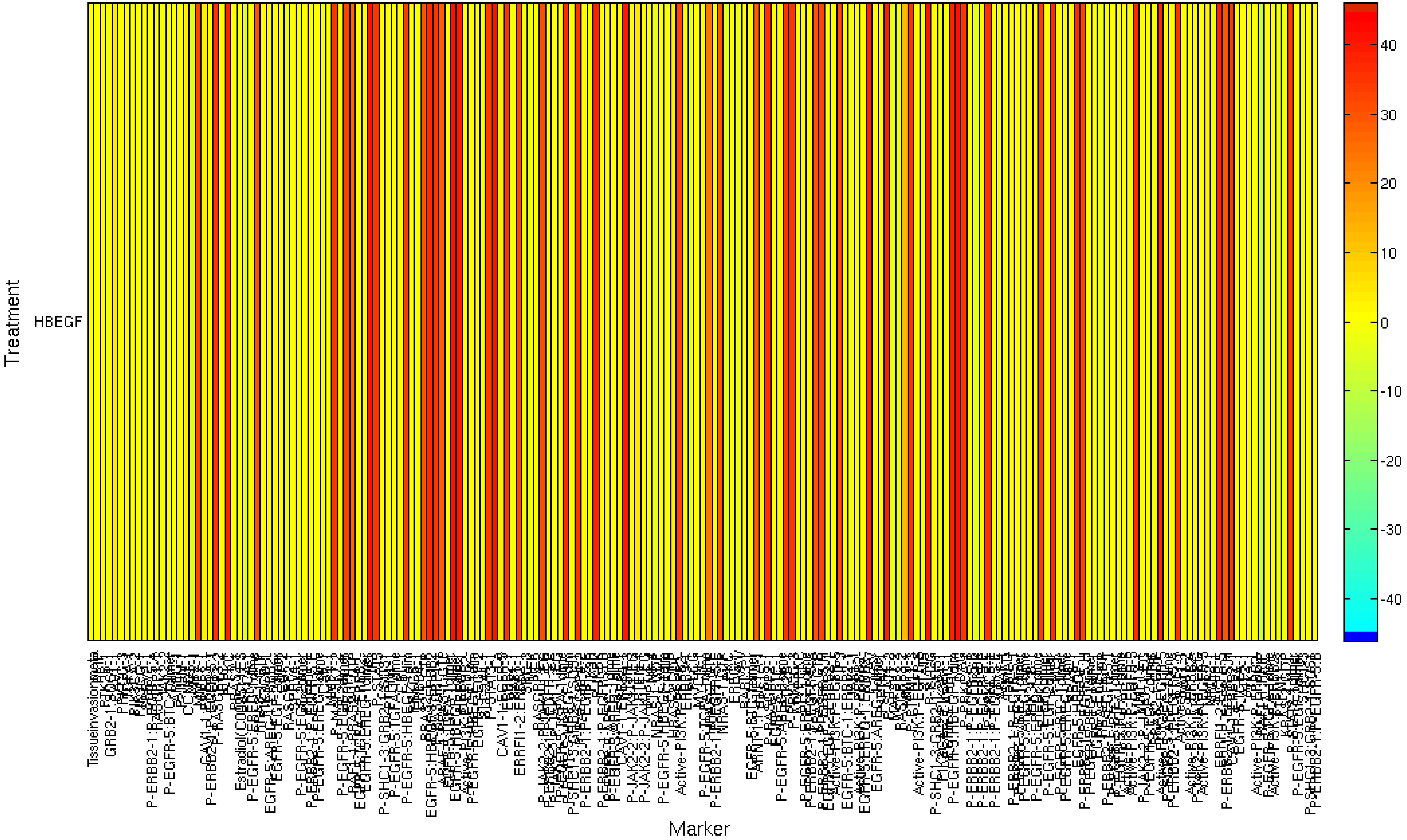
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_G$H1.tsv



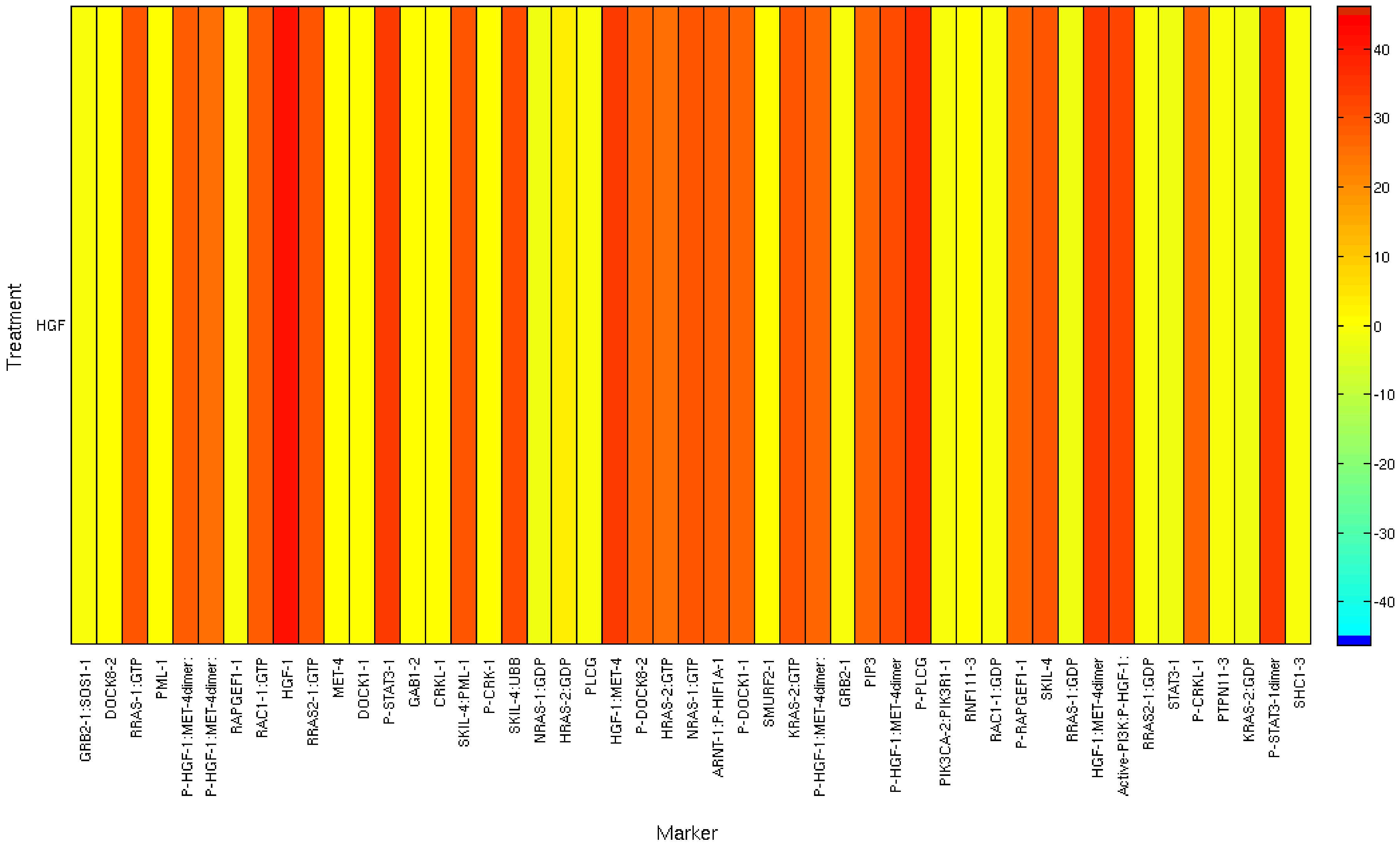


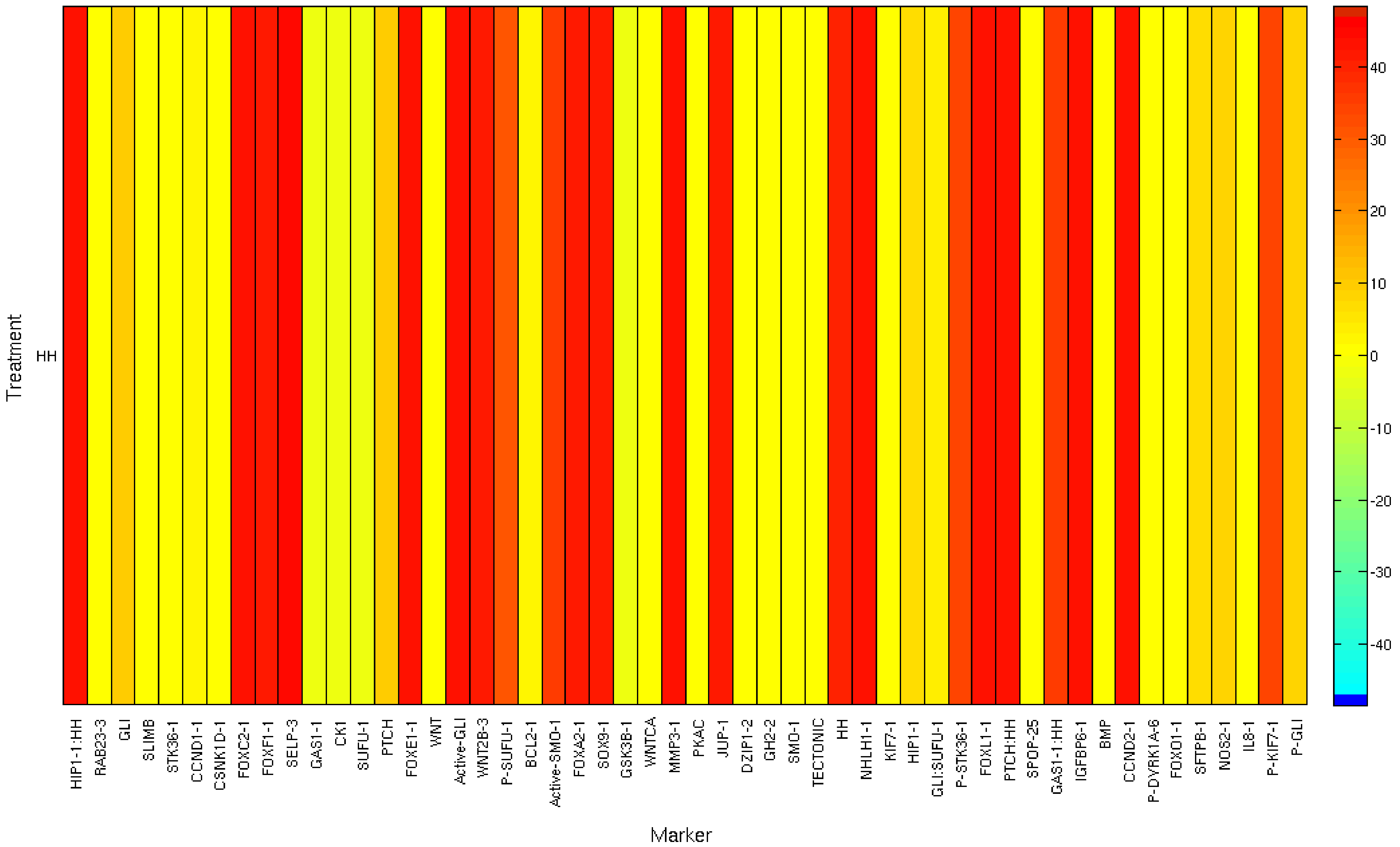
Marker Ratios (Log2 Of Geo Mean) by$summary_readout_GH2$.tsv

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_H$BEGF.tsv

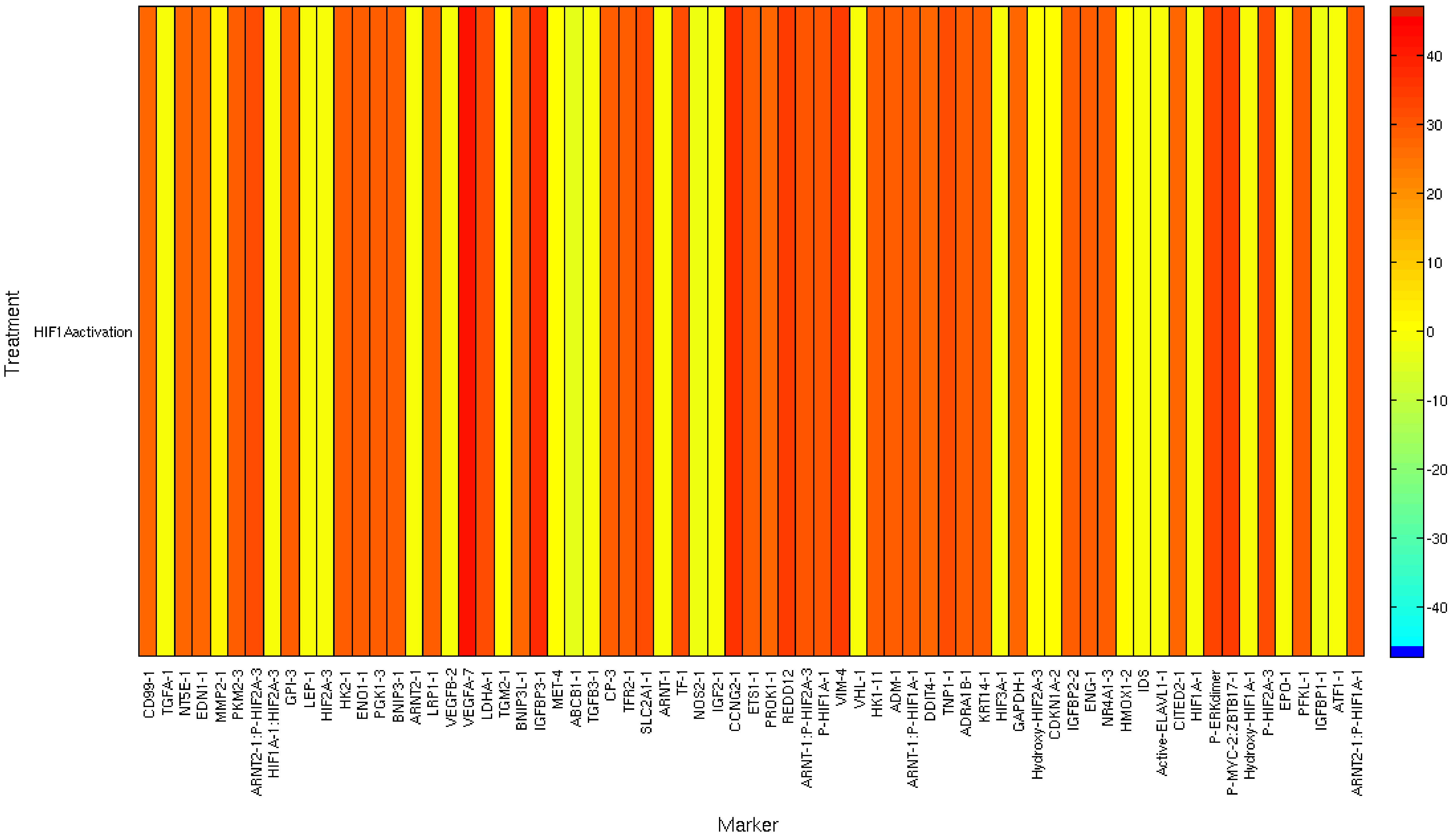


Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_H$GF.tsv

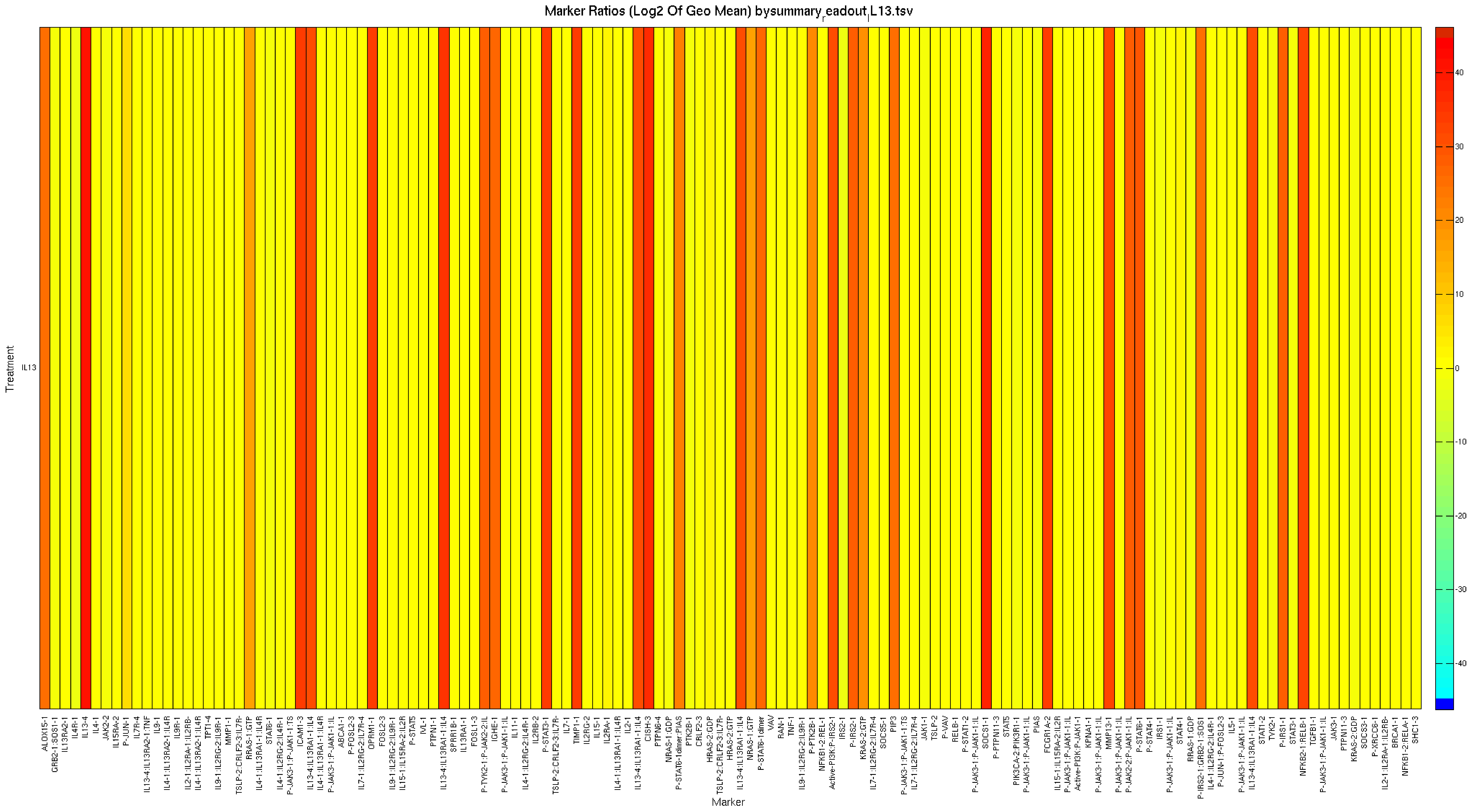


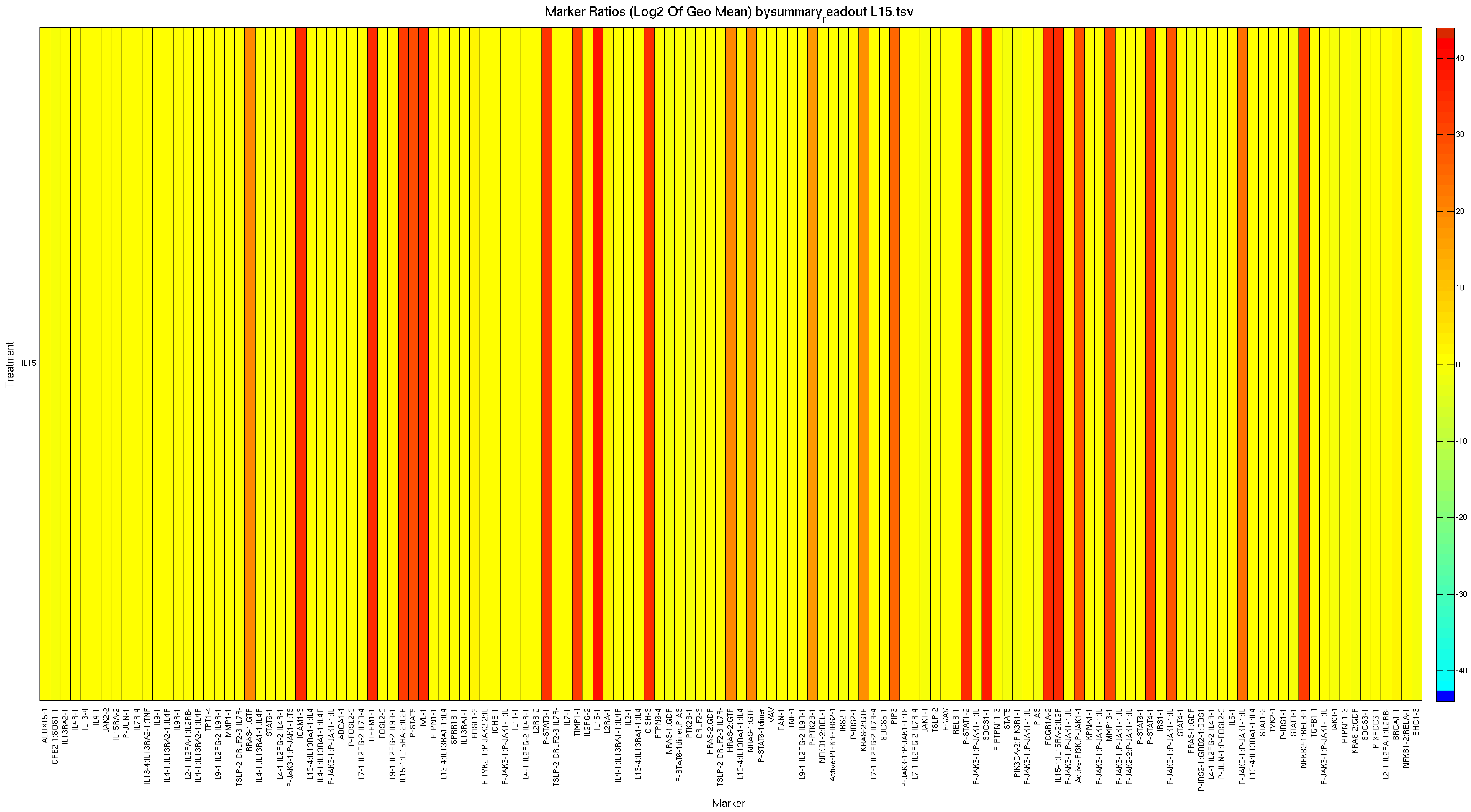


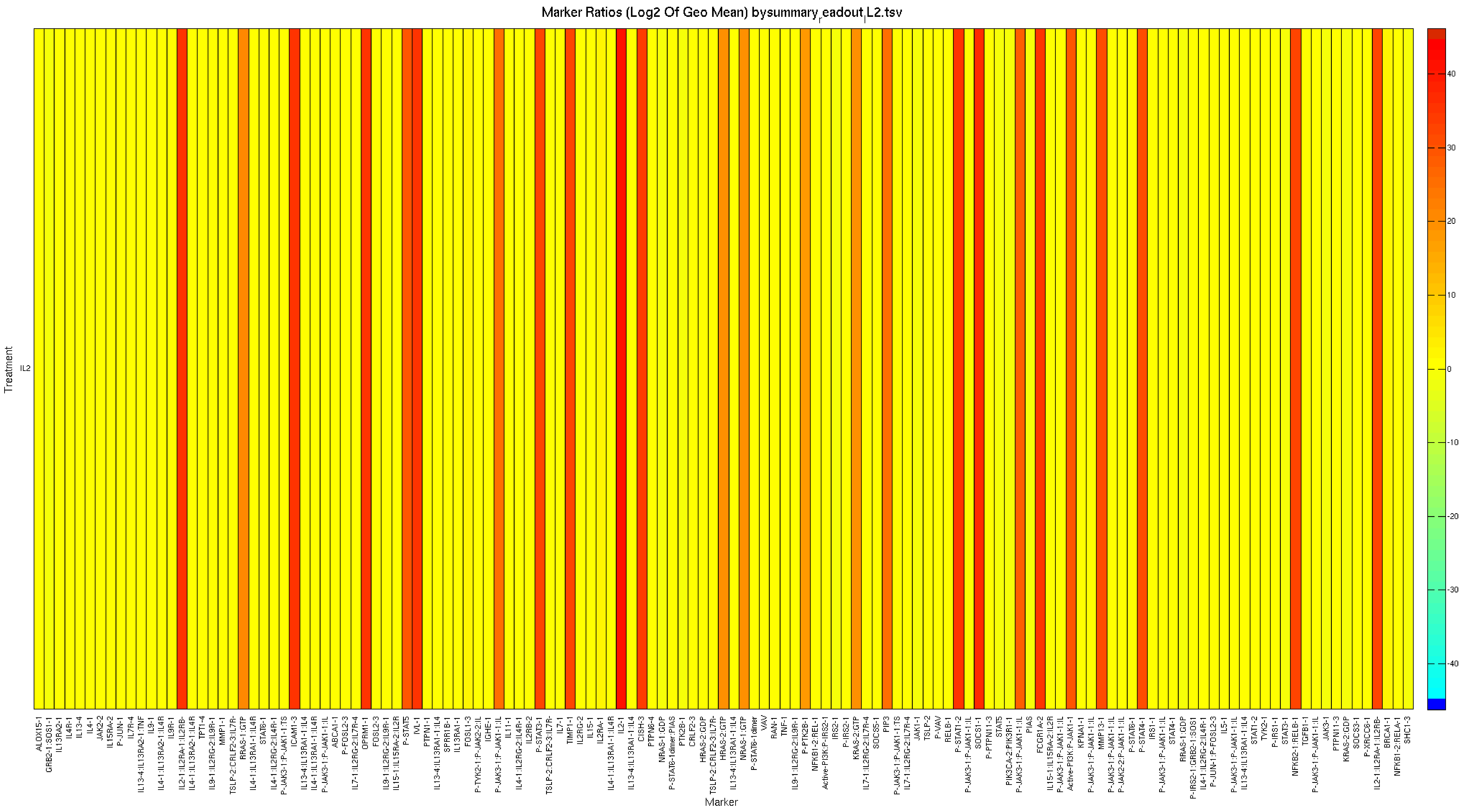
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_H$H.tsv

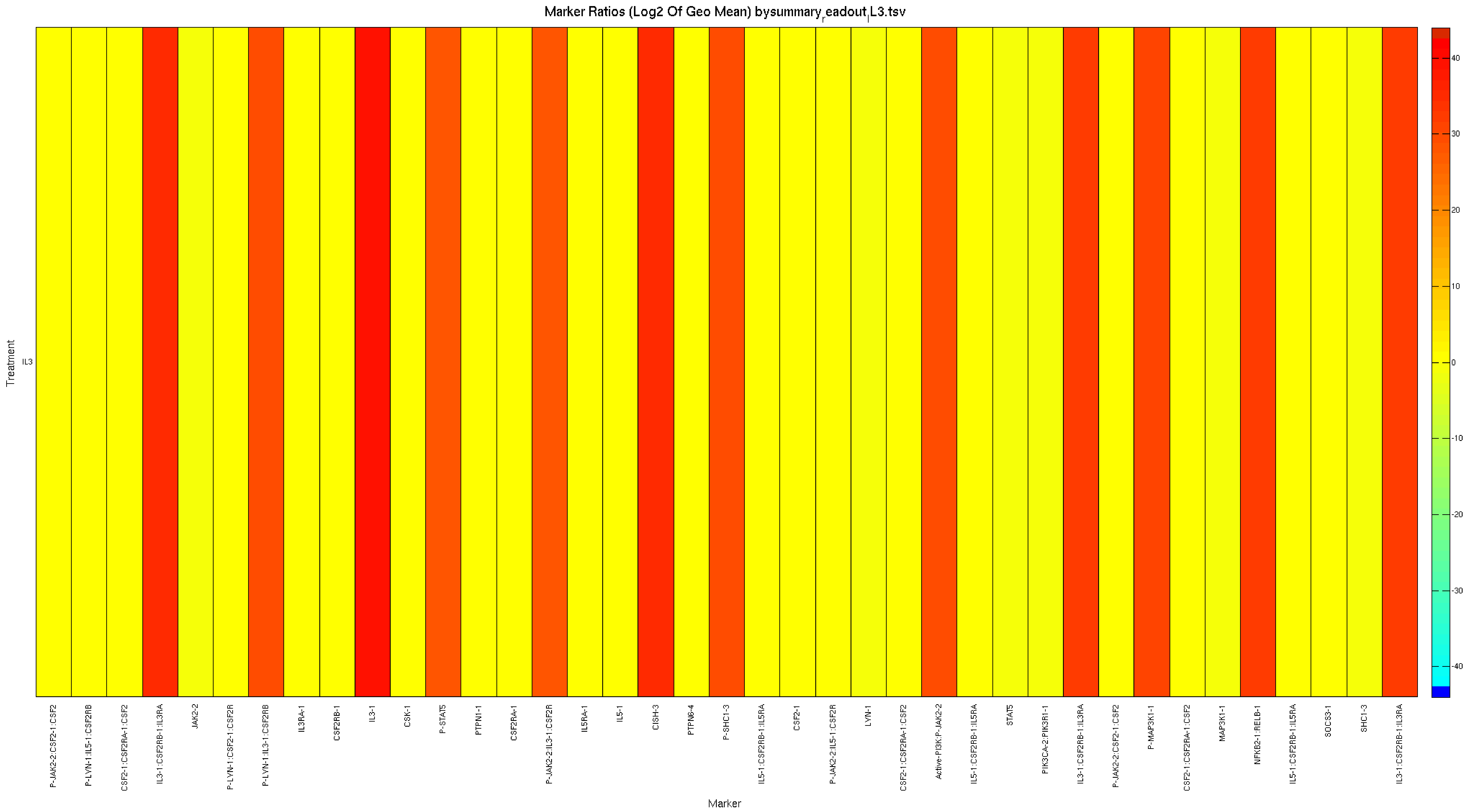


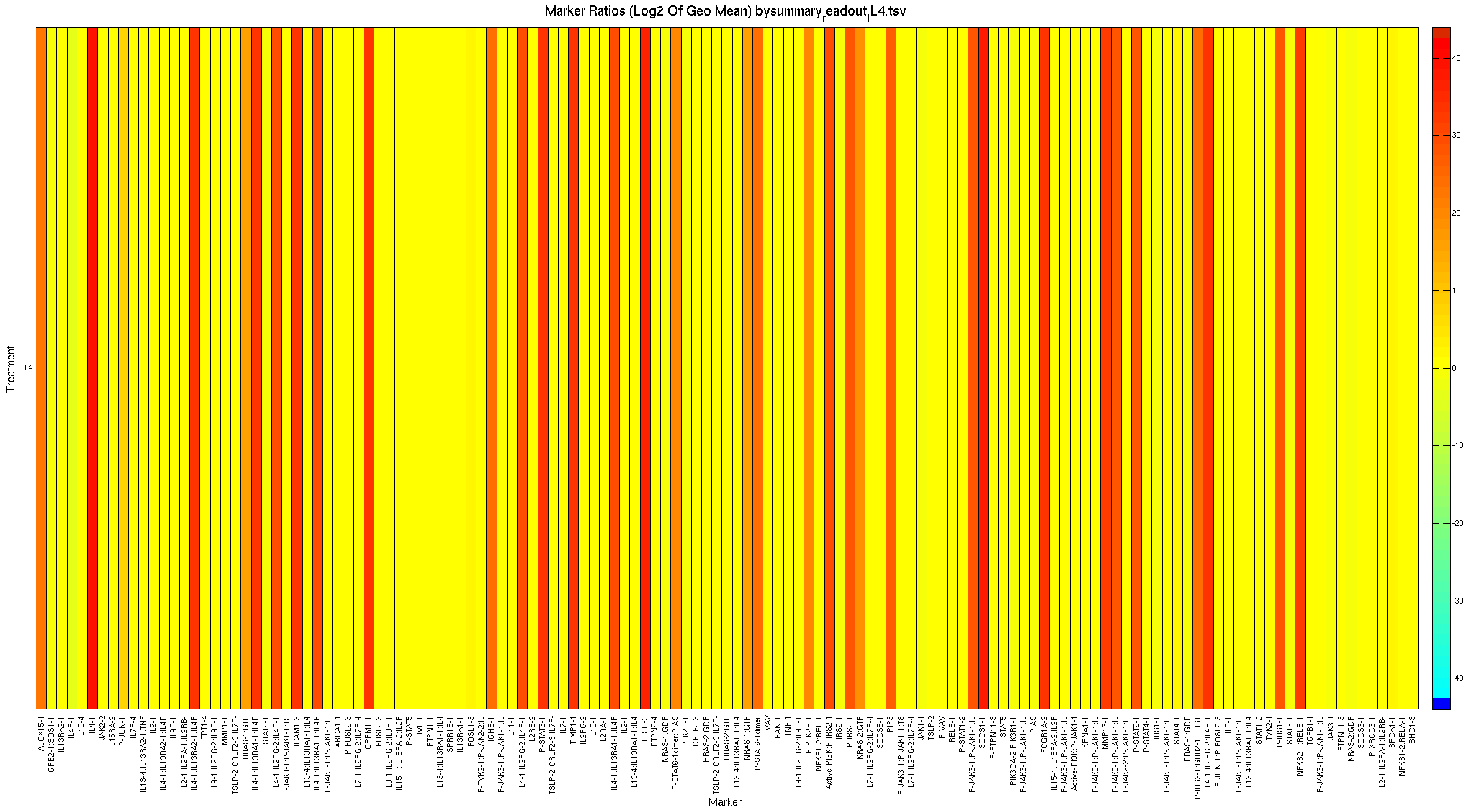
Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{H}$IF1.tsv

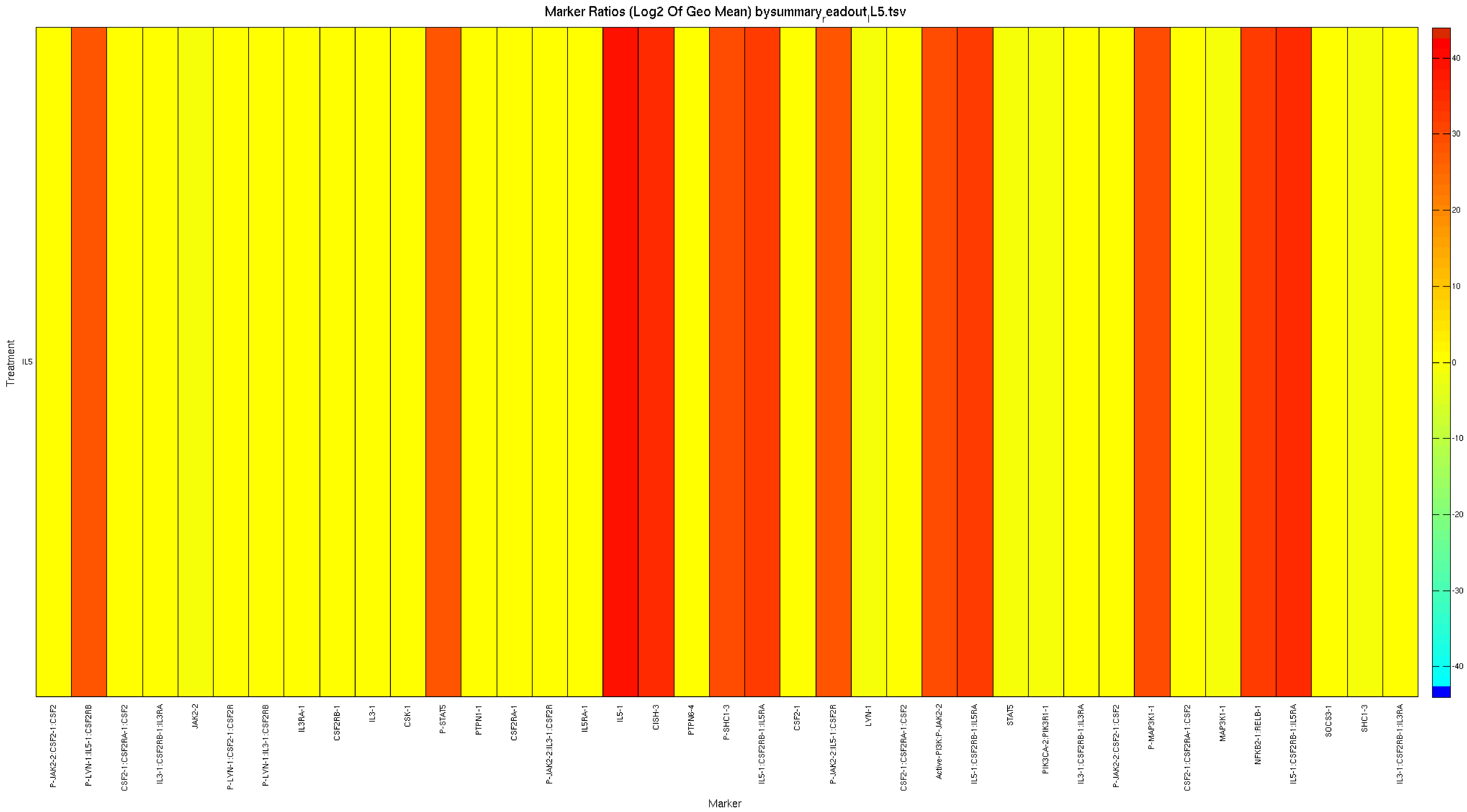

Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{I}$L13.tsv

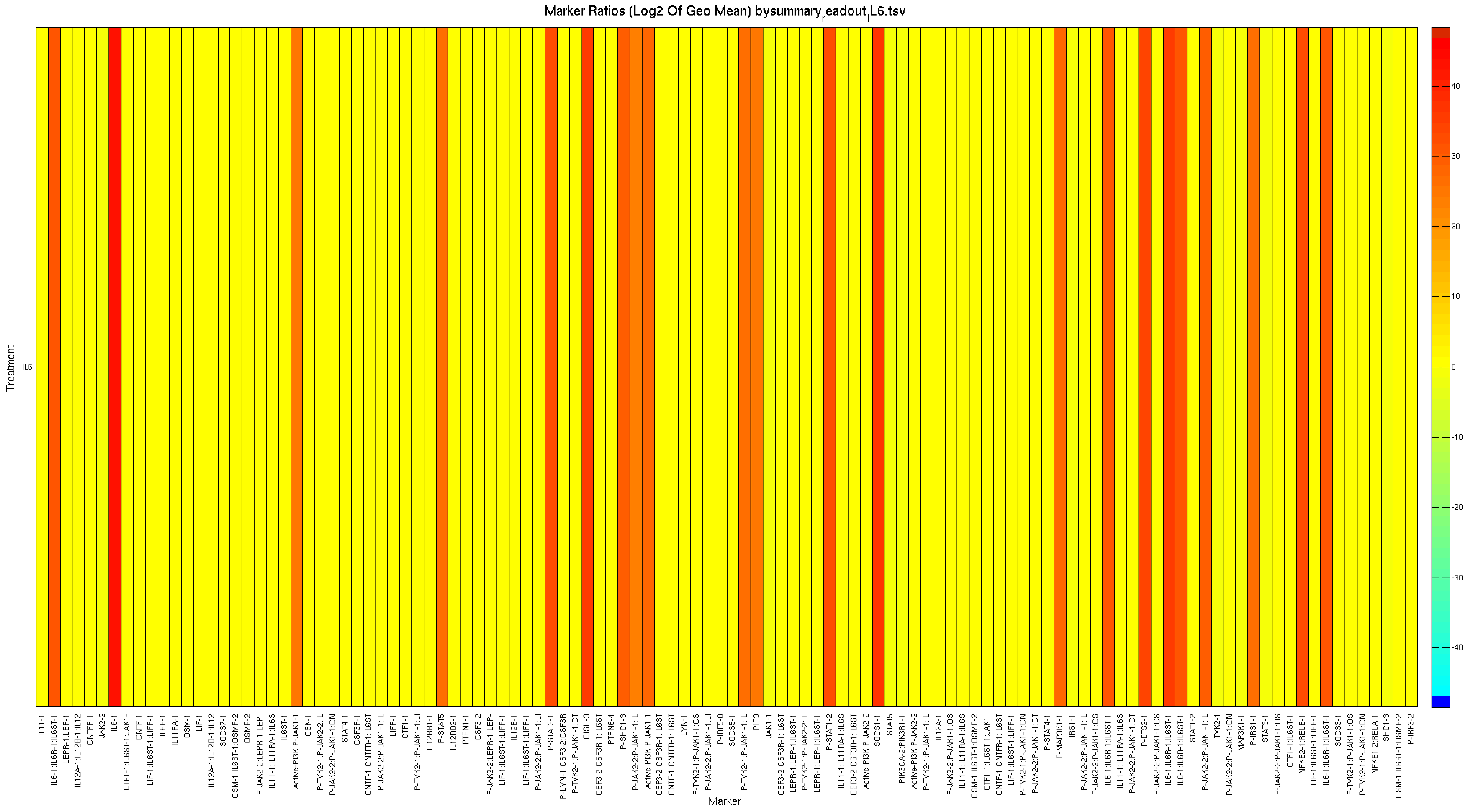

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_IL15.tsv
Treatment
IL15
Marker
40
30
20
10
0
-10
-20
-30
-40
ALOX15-1
GRB2-1:SOS1-1
IL13RA2-1
IL4R-1
IL13-4
IL4-1
JAK2-2
IL15RA-2
P-JUN-1
IL7R-4
IL13-4:IL13RA2-1:TNF
IL9-1
IL4-1:IL13RA2-1:IL4R
IL9R-1
IL2-1:IL2RA-1:IL2RB-
IL4-1:IL13RA2-1:IL4R
TPT1-4
IL9-1:IL2RG-2:IL9R-1
MMP1-1
TSLP-2:CRLF2-3:IL7R-
RRAS-1:GTP
IL4-1:IL13RA1-1:IL4R
STAT6-1
IL4-1:IL2RG-2:IL4R-1
P-JAK3-1:P-JAK1-1:TS
ICAM1-3
IL13-4:IL13RA1-1:IL4
IL4-1:IL13RA1-1:IL4R
P-JAK3-1:P-JAK1-1:IL
ABCA1-1
P-FOSL2-3
IL7-1:IL2RG-2:IL7R-4
OPRM1-1
FOSL2-3
IL9-1:IL2RG-2:IL9R-1
IL15-1:IL15RA-2:IL2R
P-STAT5
IVL-1
PTPN1-1
IL13-4:IL13RA1-1:IL4
SPRR1B-1
IL13RA1-1
FOSL1-3
P-TYK2-1:P-JAK2-2:IL
IGHE-1
P-JAK3-1:P-JAK1-1:IL
IL11-1
IL4-1:IL2RG-2:IL4R-1
IL2RB-2
P-STAT3-1
TSLP-2:CRLF2-3:IL7R-
IL7-1
TIMP1-1
IL2RG-2
IL15-1
IL2RA-1
IL4-1:IL13RA1-1:IL4R
IL2-1
IL13-4:IL13RA1-1:IL4
CISH-3
PTPN6-4
NRAS-1:GDP
P-STAT6-1dimer:PIAS
PTK2B-1
CRLF2-3
HRAS-2:GDP
TSLP-2:CRLF2-3:IL7R-
HRAS-2:GTP
IL13-4:IL13RA1-1:IL4
NRAS-1:GTP
P-STAT6-1dimer
VAV
RAN-1
TNF-1
IL9-1:IL2RG-2:IL9R-1
P-PTK2B-1
NFKB1-2:REL-1
Active-PI3K:P-IRS2-1
IRS2-1
P-IRS2-1
KRAS-2:GTP
IL7-1:IL2RG-2:IL7R-4
SOCS5-1
PIP3
P-JAK3-1:P-JAK1-1:TS
IL7-1:IL2RG-2:IL7R-4
JAK1-1
TSLP-2
P-VAV
RELB-1
P-STAT1-2
P-JAK3-1:P-JAK1-1:IL
SOCS1-1
P-PTPN11-3
STAT5
PIK3CA-2:PIK3R1-1
P-JAK3-1:P-JAK1-1:IL
PIAS
FCGR1A-2
IL15-1:IL15RA-2:IL2R
P-JAK3-1:P-JAK1-1:IL
Active-PI3K:P-JAK1-1
KPNA1-1
P-JAK3-1:P-JAK1-1:IL
MMP13-1
P-JAK3-1:P-JAK1-1:IL
P-JAK2-2:P-JAK1-1:IL
P-STAT6-1
P-STAT4-1
IRS1-1
P-JAK3-1:P-JAK1-1:IL
STAT4-1
RRAS-1:GDP
P-IRS2-1:GRB2-1:SOS1
IL4-1:IL2RG-2:IL4R-1
P-JUN-1:P-FOSL2-3
IL5-1
P-JAK3-1:P-JAK1-1:IL
IL13-4:IL13RA1-1:IL4
STAT1-2
TYK2-1
P-IRS1-1
STAT3-1
NFKB2-1:RELB-1
TGFB1-1
P-JAK3-1:P-JAK1-1:IL
JAK3-1
PTPN11-3
KRAS-2:GDP
SOCS3-1
P-XRCC6-1
IL2-1:IL2RA-1:IL2RB-
BRCA1-1
NFKB1-2:RELA-1
SHC1-3

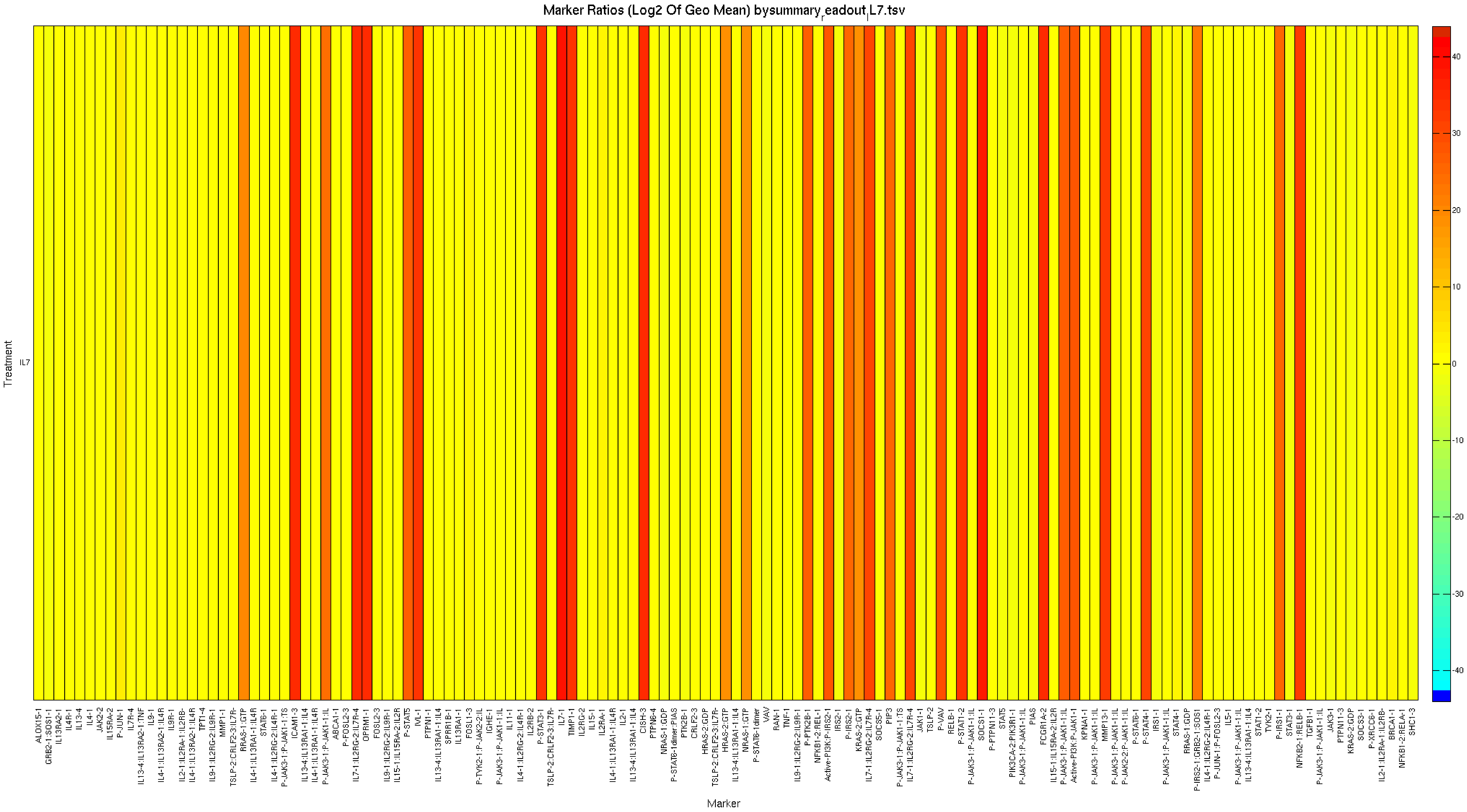

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_I$L2.tsv
Treatment
IL2
Marker
ALOX15-1
GRB2-1:SOS1-1
IL13RA2-1
IL4R-1
IL13-4
IL4-1
JAK2-2
IL15RA-2
P-JUN-1
IL7R-4
IL13-4:IL13RA2-1:TNF
IL9-1
IL4-1:IL13RA2-1:IL4R
IL9R-1
IL2-1:IL2RA-1:IL2RB-
IL4-1:IL13RA2-1:IL4R
TPT1-4
IL9-1:IL2RG-2:IL9R-1
MMP1-1
TSLP-2:CRLF2-3:IL7R-
RRAS-1:GTP
IL4-1:IL13RA1-1:IL4R
STAT6-1
IL4-1:IL2RG-2:IL4R-1
P-JAK3-1:P-JAK1-1:TS
ICAM1-3
IL13-4:IL13RA1-1:IL4
IL4-1:IL13RA1-1:IL4R
P-JAK3-1:P-JAK1-1:IL
ABCA1-1
P-FOSL2-3
IL7-1:IL2RG-2:IL7R-4
OPRM1-1
FOSL2-3
IL9-1:IL2RG-2:IL9R-1
IL15-1:IL15RA-2:IL2R
P-STAT5
IVL-1
PTPN1-1
IL13-4:IL13RA1-1:IL4
SPRR1B-1
IL13RA1-1
FOSL1-3
P-TYK2-1:P-JAK2-2:IL
IGHE-1
P-JAK3-1:P-JAK1-1:IL
IL11-1
IL4-1:IL2RG-2:IL4R-1
IL2RB-2
P-STAT3-1
TSLP-2:CRLF2-3:IL7R-
IL7-1
TIMP1-1
IL2RG-2
IL15-1
IL2RA-1
IL4-1:IL13RA1-1:IL4R
IL2-1
IL13-4:IL13RA1-1:IL4
CISH-3
PTPN6-4
NRAS-1:GDP
P-STAT6-1dimer:PIAS
PTK2B-1
CRLF2-3
HRAS-2:GDP
TSLP-2:CRLF2-3:IL7R-
HRAS-2:GTP
IL13-4:IL13RA1-1:IL4
NRAS-1:GTP
P-STAT6-1dimer
VAV
RAN-1
TNF-1
IL9-1:IL2RG-2:IL9R-1
P-PTK2B-1
NFKB1-2:REL-1
Active-PI3K:P-IRS2-1
IRS2-1
P-IRS2-1
KRAS-2:GTP
IL7-1:IL2RG-2:IL7R-4
SOCS5-1
PIP3
P-JAK3-1:P-JAK1-1:TS
IL7-1:IL2RG-2:IL7R-4
JAK1-1
TSLP-2
P-VAV
RELB-1
P-STAT1-2
P-JAK3-1:P-JAK1-1:IL
SOCS1-1
P-PTPN11-3
STAT5
PIK3CA-2:PIK3R1-1
P-JAK3-1:P-JAK1-1:IL
PIAS
FCGR1A-2
IL15-1:IL15RA-2:IL2R
P-JAK3-1:P-JAK1-1:IL
Active-PI3K:P-JAK1-1
KPNA1-1
P-JAK3-1:P-JAK1-1:IL
MMP13-1
P-JAK3-1:P-JAK1-1:IL
P-JAK2-2:P-JAK1-1:IL
P-STAT6-1
P-STAT4-1
IRS1-1
P-JAK3-1:P-JAK1-1:IL
STAT4-1
RRAS-1:GDP
P-IRS2-1:GRB2-1:SOS1
IL4-1:IL2RG-2:IL4R-1
P-JUN-1:P-FOSL2-3
IL5-1
P-JAK3-1:P-JAK1-1:IL
IL13-4:IL13RA1-1:IL4
STAT1-2
TYK2-1
P-IRS1-1
STAT3-1
NFKB2-1:RELB-1
TGFB1-1
P-JAK3-1:P-JAK1-1:IL
JAK3-1
PTPN11-3
KRAS-2:GDP
SOCS3-1
P-XRCC6-1
IL2-1:IL2RA-1:IL2RB-
BRCA1-1
NFKB1-2:RELA-1
SHC1-3
40
30
20
10
0
-10
-20
-30
-40


Marker Ratios (Log2 Of Geo Mean) bysummary_readout_IL3.tsv
Treatment
IL3
P-JAK2-2:CSF2-1:CSF2
P-LYN-1:IL5-1:CSF2RB
CSF2-1:CSF2RA-1:CSF2
IL3-1:CSF2RB-1:IL3RA
JAK2-2
P-LYN-1:CSF2-1:CSF2R
P-LYN-1:IL3-1:CSF2RB
IL3RA-1
CSF2RB-1
IL3-1
CSK-1
P-STAT5
PTPN1-1
CSF2RA-1
P-JAK2-2:IL3-1:CSF2R
IL5RA-1
IL5-1
CISH-3
PTPN6-4
P-SHC1-3
IL5-1:CSF2RB-1:IL5RA
CSF2-1
P-JAK2-2:IL5-1:CSF2R
LYN-1
CSF2-1:CSF2RA-1:CSF2
Active-PI3K:P-JAK2-2
IL5-1:CSF2RB-1:IL5RA
STAT5
PIK3CA-2:PIK3R1-1
IL3-1:CSF2RB-1:IL3RA
P-JAK2-2:CSF2-1:CSF2
P-MAP3K1-1
CSF2-1:CSF2RA-1:CSF2
MAP3K1-1
NFKB2-1:RELB-1
IL5-1:CSF2RB-1:IL5RA
SOCS3-1
SHC1-3
IL3-1:CSF2RB-1:IL3RA
Marker
40
30
20
10
0
-10
-20
-30
-40

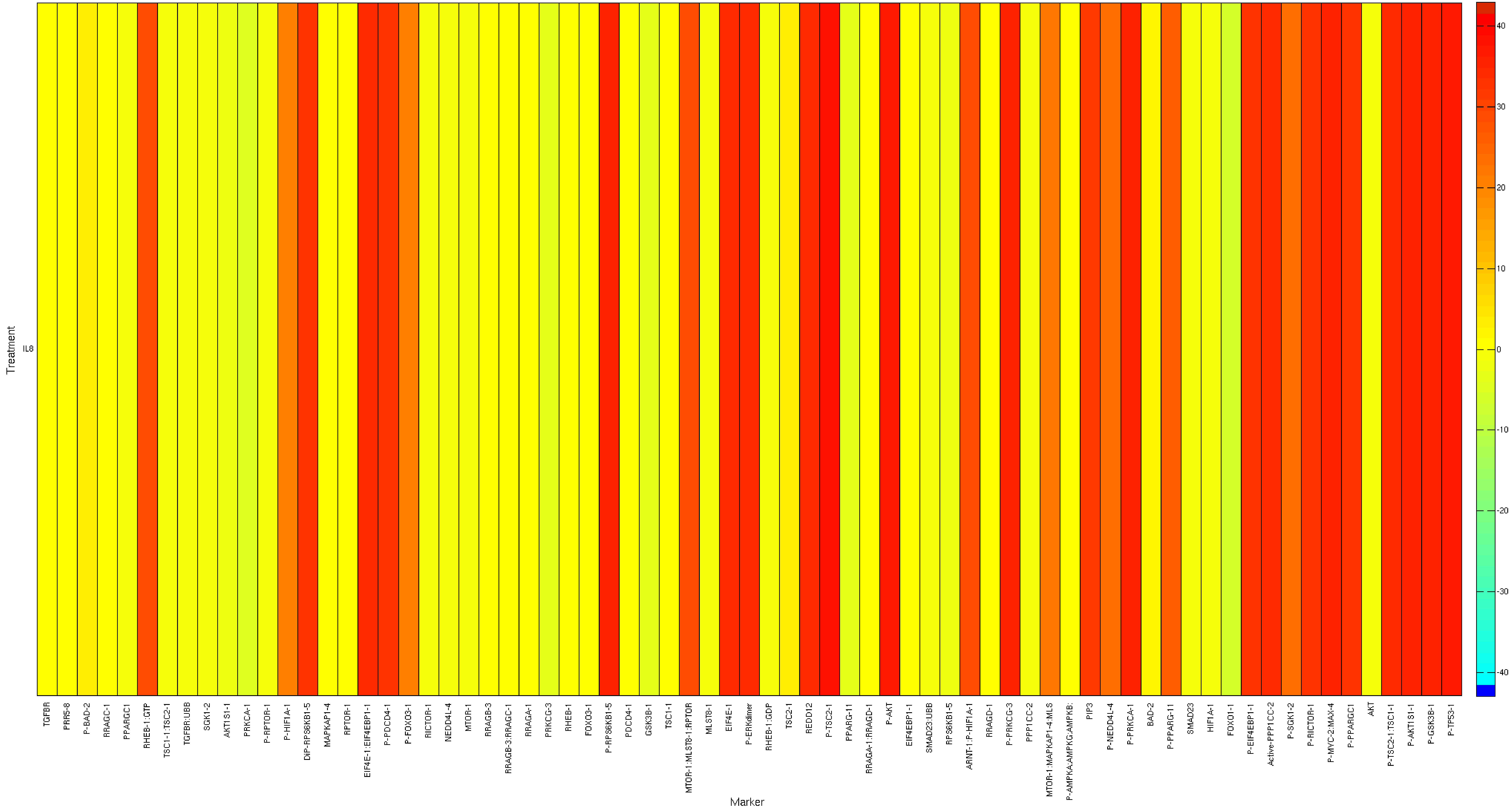

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_IL4.tsv
Treatment
IL4
Marker
ALOX15-1
GRB2-1:SOS1-1
IL13RA2-1
IL4R-1
IL13-4
IL4-1
JAK2-2
IL15RA-2
P-JUN-1
IL7R-4
IL13-4:IL13RA2-1:TNF
IL9-1
IL4-1:IL13RA2-1:IL4R
IL9R-1
IL2-1:IL2RA-1:IL2RB-
IL4-1:IL13RA2-1:IL4R
TPT1-4
IL9-1:IL2RG-2:IL9R-1
MMP1-1
TSLP-2:CRLF2-3:IL7R-
RRAS-1:GTP
IL4-1:IL13RA1-1:IL4R
STAT6-1
IL4-1:IL2RG-2:IL4R-1
P-JAK3-1:P-JAK1-1:TS
ICAM1-3
IL13-4:IL13RA1-1:IL4
IL4-1:IL13RA1-1:IL4R
P-JAK3-1:P-JAK1-1:IL
ABCA1-1
P-FOSL2-3
IL7-1:IL2RG-2:IL7R-4
OPRM1-1
FOSL2-3
IL9-1:IL2RG-2:IL9R-1
IL15-1:IL15RA-2:IL2R
P-STAT5
IVL-1
PTPN1-1
IL13-4:IL13RA1-1:IL4
SPRR1B-1
IL13RA1-1
FOSL1-3
P-TYK2-1:P-JAK2-2:IL
IGHE-1
P-JAK3-1:P-JAK1-1:IL
IL11-1
IL4-1:IL2RG-2:IL4R-1
IL2RB-2
P-STAT3-1
TSLP-2:CRLF2-3:IL7R-
IL7-1
TIMP1-1
IL2RG-2
IL15-1
IL2RA-1
IL4-1:IL13RA1-1:IL4R
IL2-1
IL13-4:IL13RA1-1:IL4
CISH-3
PTPN6-4
NRAS-1:GDP
P-STAT6-1dimer:PIAS
PTK2B-1
CRLF2-3
HRAS-2:GDP
TSLP-2:CRLF2-3:IL7R-
HRAS-2:GTP
IL13-4:IL13RA1-1:IL4
NRAS-1:GTP
P-STAT6-1dimer
VAV
RAN-1
TNF-1
IL9-1:IL2RG-2:IL9R-1
P-PTK2B-1
NFKB1-2:REL-1
Active-PI3K:P-IRS2-1
IRS2-1
P-IRS2-1
KRAS-2:GTP
IL7-1:IL2RG-2:IL7R-4
SOCS5-1
PIP3
P-JAK3-1:P-JAK1-1:TS
IL7-1:IL2RG-2:IL7R-4
JAK1-1
TSLP-2
P-VAV
RELB-1
P-STAT1-2
P-JAK3-1:P-JAK1-1:IL
SOCS1-1
P-PTPN11-3
STAT5
PIK3CA-2:PIK3R1-1
P-JAK3-1:P-JAK1-1:IL
PIAS
FCGR1A-2
IL15-1:IL15RA-2:IL2R
P-JAK3-1:P-JAK1-1:IL
Active-PI3K:P-JAK1-1
KPNA1-1
P-JAK3-1:P-JAK1-1:IL
MMP13-1
P-JAK3-1:P-JAK1-1:IL
P-JAK2-2:P-JAK1-1:IL
P-STAT6-1
P-STAT4-1
IRS1-1
P-JAK3-1:P-JAK1-1:IL
STAT4-1
RRAS-1:GDP
P-IRS2-1:GRB2-1:SOS1
IL4-1:IL2RG-2:IL4R-1
P-JUN-1:P-FOSL2-3
IL5-1
P-JAK3-1:P-JAK1-1:IL
IL13-4:IL13RA1-1:IL4
STAT1-2
TYK2-1
P-IRS1-1
STAT3-1
NFKB2-1:RELB-1
TGFB1-1
P-JAK3-1:P-JAK1-1:IL
JAK3-1
PTPN11-3
KRAS-2:GDP
SOCS3-1
P-XRCC6-1
IL2-1:IL2RA-1:IL2RB-
BRCA1-1
NFKB1-2:RELA-1
SHC1-3
40
30
20
10
0
-10
-20
-30
-40

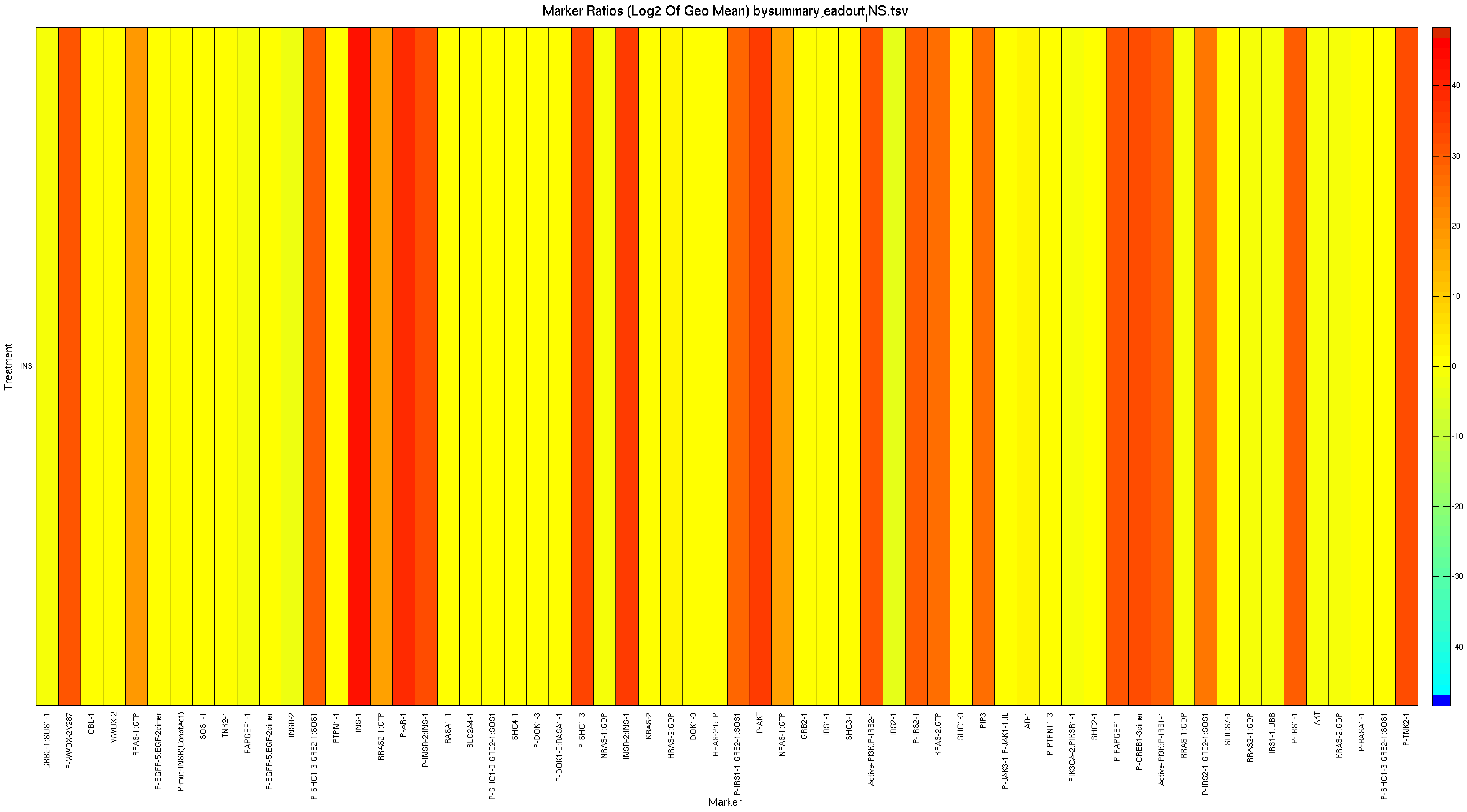

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_IL5.tsv
Treatment
IL5
P-JAK2-2:CSF2-1:CSF2
P-LYN-1:IL5-1:CSF2RB
CSF2-1:CSF2RA-1:CSF2
IL3-1:CSF2RB-1:IL3RA
JAK2-2
P-LYN-1:CSF2-1:CSF2R
P-LYN-1:IL3-1:CSF2RB
IL3RA-1
CSF2RB-1
IL3-1
CSK-1
P-STAT5
PTPN1-1
CSF2RA-1
P-JAK2-2:IL3-1:CSF2R
IL5RA-1
IL5-1
CISH-3
PTPN6-4
P-SHC1-3
IL5-1:CSF2RB-1:IL5RA
CSF2-1
P-JAK2-2:IL5-1:CSF2R
LYN-1
CSF2-1:CSF2RA-1:CSF2
Active-PI3K:P-JAK2-2
IL5-1:CSF2RB-1:IL5RA
STAT5
PIK3CA-2:PIK3R1-1
IL3-1:CSF2RB-1:IL3RA
P-JAK2-2:CSF2-1:CSF2
P-MAP3K1-1
CSF2-1:CSF2RA-1:CSF2
MAP3K1-1
NFKB2-1:RELB-1
IL5-1:CSF2RB-1:IL5RA
SOCS3-1
SHC1-3
IL3-1:CSF2RB-1:IL3RA
Marker
40
30
20
10
0
-10
-20
-30
-40

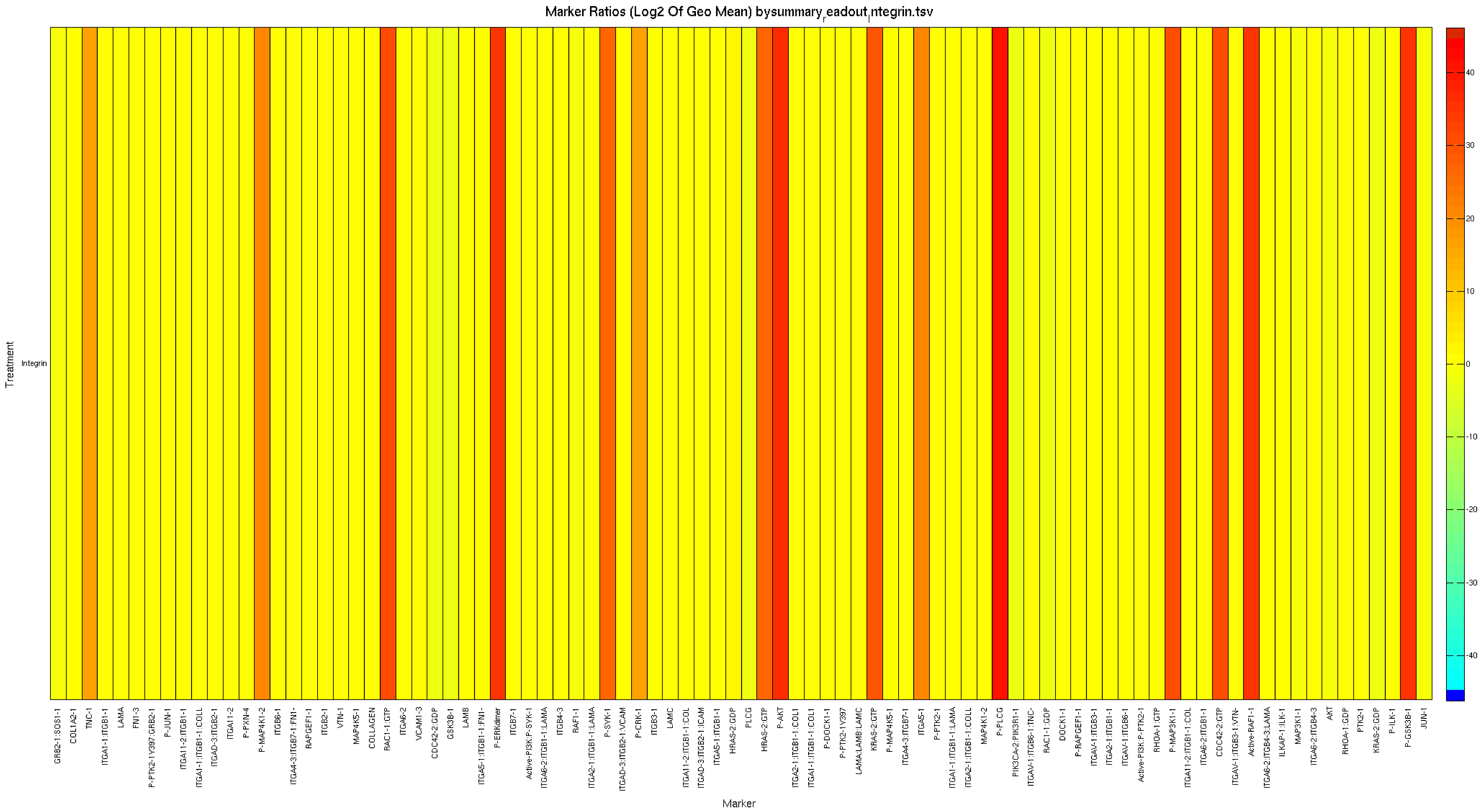

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_I$L6.tsv
Treatment
IL6
Marker
IL11-1
IL6-1:IL6R-1:IL6ST-1
LEPR-1:LEP-1
IL12A-1:IL12B-1:IL12
CNTFR-1
JAK2-2
IL6-1
CTF1-1:IL6ST-1:JAK1-
CNTF-1
LIF-1:IL6ST-1:LIFR-1
IL6R-1
IL11RA-1
OSM-1
LIF-1
IL12A-1:IL12B-1:IL12
SOCS7-1
OSM-1:IL6ST-1:OSMR-2
OSMR-2
P-JAK2-2:LEPR-1:LEP-
IL11-1:IL11RA-1:IL6S
IL6ST-1
Active-PI3K:P-JAK1-1
CSK-1
P-TYK2-1:P-JAK2-2:IL
P-JAK2-2:P-JAK1-1:CN
STAT4-1
CSF3R-1
CNTF-1:CNTFR-1:IL6ST
P-JAK2-2:P-JAK1-1:IL
LIFR-1
CTF1-1
P-TYK2-1:P-JAK1-1:LI
IL12RB1-1
P-STAT5
IL12RB2-1
PTPN1-1
CSF3-2
P-JAK2-2:LEPR-1:LEP-
LIF-1:IL6ST-1:LIFR-1
IL12B-1
LIF-1:IL6ST-1:LIFR-1
P-JAK2-2:P-JAK1-1:LI
P-STAT3-1
P-LYN-1:CSF3-2:CSF3R
P-TYK2-1:P-JAK1-1:CT
CISH-3
CSF3-2:CSF3R-1:IL6ST
PTPN6-4
P-SHC1-3
P-JAK2-2:P-JAK1-1:IL
Active-PI3K:P-JAK1-1
CSF3-2:CSF3R-1:IL6ST
CNTF-1:CNTFR-1:IL6ST
LYN-1
P-TYK2-1:P-JAK1-1:CS
P-JAK2-2:P-JAK1-1:LI
P-IRF5-8
SOCS5-1
P-TYK2-1:P-JAK1-1:IL
PIP3
JAK1-1
CSF3-2:CSF3R-1:IL6ST
LEPR-1:LEP-1:IL6ST-1
P-TYK2-1:P-JAK2-2:IL
LEPR-1:LEP-1:IL6ST-1
P-STAT1-2
IL11-1:IL11RA-1:IL6S
CSF3-2:CSF3R-1:IL6ST
Active-PI3K:P-JAK2-2
SOCS1-1
STAT5
PIK3CA-2:PIK3R1-1
Active-PI3K:P-JAK2-2
P-TYK2-1:P-JAK1-1:IL
IL12A-1
P-JAK2-2:P-JAK1-1:OS
IL11-1:IL11RA-1:IL6S
OSM-1:IL6ST-1:OSMR-2
CTF1-1:IL6ST-1:JAK1-
CNTF-1:CNTFR-1:IL6ST
LIF-1:IL6ST-1:LIFR-1
P-TYK2-1:P-JAK1-1:CN
P-JAK2-2:P-JAK1-1:CT
P-STAT4-1
P-MAP3K1-1
IRS1-1
P-JAK2-2:P-JAK1-1:IL
P-JAK2-2:P-JAK1-1:CS
IL6-1:IL6R-1:IL6ST-1
IL11-1:IL11RA-1:IL6S
P-JAK2-2:P-JAK1-1:CT
P-ETS2-1
P-JAK2-2:P-JAK1-1:CS
IL6-1:IL6R-1:IL6ST-1
IL6-1:IL6R-1:IL6ST-1
STAT1-2
P-JAK2-2:P-JAK1-1:IL
TYK2-1
P-JAK2-2:P-JAK1-1:CN
MAP3K1-1
P-IRS1-1
STAT3-1
P-JAK2-2:P-JAK1-1:OS
CTF1-1:IL6ST-1
NFKB2-1:RELB-1
LIF-1:IL6ST-1:LIFR-1
IL6-1:IL6R-1:IL6ST-1
SOCS3-1
P-TYK2-1:P-JAK1-1:OS
P-TYK2-1:P-JAK1-1:CN
NFKB1-2:RELA-1
SHC1-3
OSM-1:IL6ST-1:OSMR-2
P-IRF3-2
40
30
20
10
0
-10
-20
-30
-40


Marker Ratios (Log2 Of Geo Mean) bysummary_readout_IL7.tsv
Treatment
IL7
Marker
40
30
20
10
0
-10
-20
-30
-40
ALOX15-1
GRB2-1:SOS1-1
IL13RA2-1
IL4R-1
IL13-4
IL4-1
JAK2-2
IL15RA-2
P-JUN-1
IL7R-4
IL13-4:IL13RA2-1:TNF
IL9-1
IL4-1:IL13RA2-1:IL4R
IL9R-1
IL2-1:IL2RA-1:IL2RB-
IL4-1:IL13RA2-1:IL4R
TPT1-4
IL9-1:IL2RG-2:IL9R-1
MMP1-1
TSLP-2:CRLF2-3:IL7R-
RRAS-1:GTP
IL4-1:IL13RA1-1:IL4R
STAT6-1
IL4-1:IL2RG-2:IL4R-1
P-JAK3-1:P-JAK1-1:TS
ICAM1-3
IL13-4:IL13RA1-1:IL4
IL4-1:IL13RA1-1:IL4R
P-JAK3-1:P-JAK1-1:IL
ABCA1-1
P-FOSL2-3
IL7-1:IL2RG-2:IL7R-4
OPRM1-1
FOSL2-3
IL9-1:IL2RG-2:IL9R-1
IL15-1:IL15RA-2:IL2R
P-STAT5
IVL-1
PTPN1-1
IL13-4:IL13RA1-1:IL4
SPRR1B-1
IL13RA1-1
FOSL1-3
P-TYK2-1:P-JAK2-2:IL
IGHE-1
P-JAK3-1:P-JAK1-1:IL
IL11-1
IL4-1:IL2RG-2:IL4R-1
IL2RB-2
P-STAT3-1
TSLP-2:CRLF2-3:IL7R-
IL7-1
TIMP1-1
IL2RG-2
IL15-1
IL2RA-1
IL4-1:IL13RA1-1:IL4R
IL2-1
IL13-4:IL13RA1-1:IL4
CISH-3
PTPN6-4
NRAS-1:GDP
P-STAT6-1dimer:PIAS
PTK2B-1
CRLF2-3
HRAS-2:GDP
TSLP-2:CRLF2-3:IL7R-
HRAS-2:GTP
IL13-4:IL13RA1-1:IL4
NRAS-1:GTP
P-STAT6-1dimer
VAV
RAN-1
TNF-1
IL9-1:IL2RG-2:IL9R-1
P-PTK2B-1
NFKB1-2:REL-1
Active-PI3K:P-IRS2-1
IRS2-1
P-IRS2-1
KRAS-2:GTP
IL7-1:IL2RG-2:IL7R-4
SOCS5-1
PIP3
P-JAK3-1:P-JAK1-1:TS
IL7-1:IL2RG-2:IL7R-4
JAK1-1
TSLP-2
P-VAV
RELB-1
P-STAT1-2
P-JAK3-1:P-JAK1-1:IL
SOCS1-1
P-PTPN11-3
STAT5
PIK3CA-2:PIK3R1-1
P-JAK3-1:P-JAK1-1:IL
PIAS
FCGR1A-2
IL15-1:IL15RA-2:IL2R
P-JAK3-1:P-JAK1-1:IL
Active-PI3K:P-JAK1-1
KPNA1-1
P-JAK3-1:P-JAK1-1:IL
MMP13-1
P-JAK3-1:P-JAK1-1:IL
P-JAK2-2:P-JAK1-1:IL
P-STAT6-1
P-STAT4-1
IRS1-1
P-JAK3-1:P-JAK1-1:IL
STAT4-1
RRAS-1:GDP
P-IRS2-1:GRB2-1:SOS1
IL4-1:IL2RG-2:IL4R-1
P-JUN-1:P-FOSL2-3
IL5-1
P-JAK3-1:P-JAK1-1:IL
IL13-4:IL13RA1-1:IL4
STAT1-2
TYK2-1
P-IRS1-1
STAT3-1
NFKB2-1:RELB-1
TGFB1-1
P-JAK3-1:P-JAK1-1:IL
JAK3-1
PTPN11-3
KRAS-2:GDP
SOCS3-1
P-XRCC6-1
IL2-1:IL2RA-1:IL2RB-
BRCA1-1
NFKB1-2:RELA-1
SHC1-3

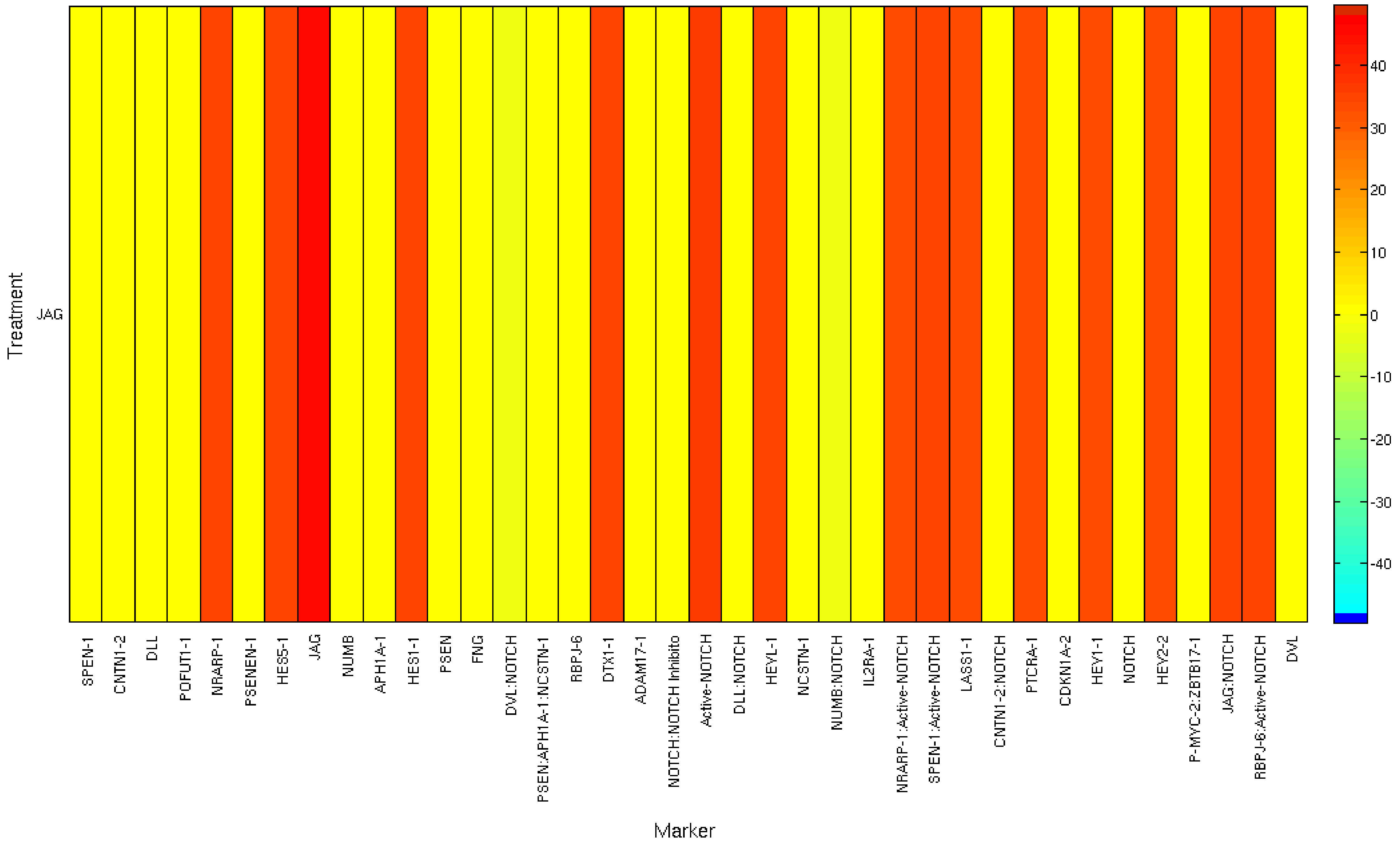
Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{I}$L8.tsv

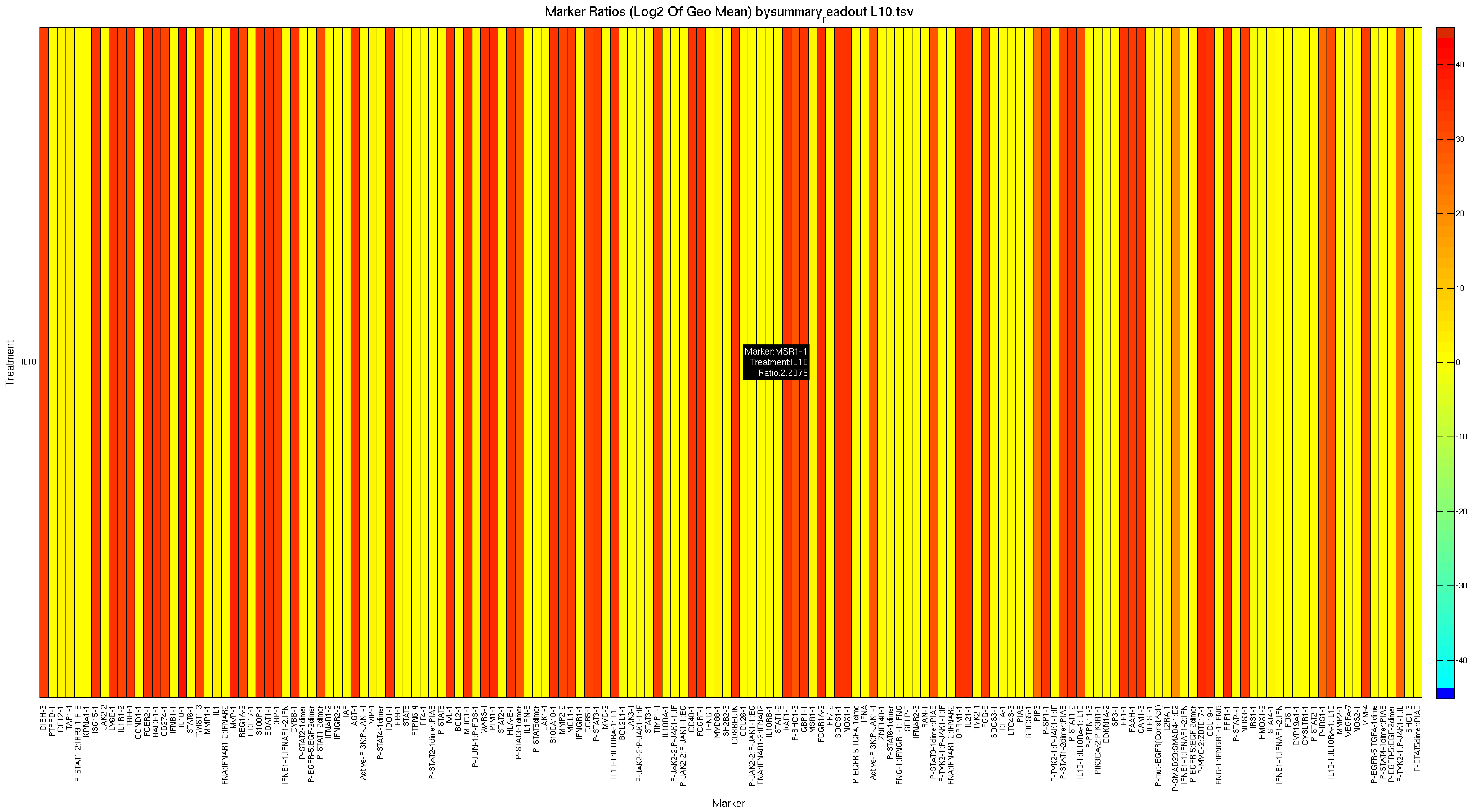



Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_I$NS.tsv
Treatment
INS
Marker
GRB2-1:SOS1-1
P-WWOX-2Y287
CBL-1
WWOX-2
RRAS-1:GTP
P-EGFR-5:EGF-2dimer
P-mut-INSR(ConstAct)
SOS1-1
TNK2-1
RAPGEF1-1
P-EGFR-5:EGF-2dimer
INSR-2
P-SHC1-3:GRB2-1:SOS1
PTPN1-1
INS-1
RRAS2-1:GTP
P-AR-1
P-INSR-2:INS-1
RASA1-1
SLC2A4-1
P-SHC1-3:GRB2-1:SOS1
SHC4-1
P-DOK1-3
P-DOK1-3:RASA1-1
P-SHC1-3
NRAS-1:GDP
INSR-2:INS-1
KRAS-2
HRAS-2:GDP
DOK1-3
HRAS-2:GTP
P-IRS1-1:GRB2-1:SOS1
P-AKT
NRAS-1:GTP
GRB2-1
IRS1-1
SHC3-1
Active-PI3K:P-IRS2-1
IRS2-1
P-IRS2-1
KRAS-2:GTP
SHC1-3
PIP3
P-JAK3-1:P-JAK1-1:IL
AR-1
P-PTPN11-3
PIK3CA-2:PIK3R1-1
SHC2-1
P-RAPGEF1-1
P-CREB1-3dimer
Active-PI3K:P-IRS1-1
RRAS-1:GDP
P-IRS2-1:GRB2-1:SOS1
SOCS7-1
RRAS2-1:GDP
IRS1-1:UBB
P-IRS1-1
AKT
KRAS-2:GDP
P-RASA1-1
P-SHC1-3:GRB2-1:SOS1
P-TNK2-1
40
30
20
10
0
-10
-20
-30
-40


Marker Ratios (Log2 Of Geo Mean) bysummary_readout_integrin.tsv
Treatment
Integrin
Marker
40
30
20
10
0
-10
-20
-30
-40
GRB2-1:SOS1-1
COL1A2-1
TNC-1
ITGA1-1:ITGB1-1
LAMA
FN1-3
P-PTK2-1Y397:GRB2-1
P-JUN-1
ITGA11-2:ITGB1-1
ITGA1-1:ITGB1-1:COLL
ITGAD-3:ITGB2-1
ITGA11-2
P-PXN-4
P-MAP4K1-2
ITGB6-1
ITGA4-3:ITGB7-1:FN1-
RAPGEF1-1
ITGB2-1
VTN-1
MAP4K5-1
COLLAGEN
RAC1-1:GTP
ITGA6-2
VCAM1-3
CDC42-2:GDP
GSK3B-1
LAMB
ITGA5-1:ITGB1-1:FN1-
P-ERKdimer
ITGB7-1
Active-PI3K:P-SYK-1
ITGA6-2:ITGB1-1:LAMA
ITGB4-3
RAF1-1
ITGA2-1:ITGB1-1:LAMA
P-SYK-1
ITGAD-3:ITGB2-1:VCAM
P-CRK-1
ITGB3-1
LAMC
ITGA11-2:ITGB1-1:COL
ITGAD-3:ITGB2-1:ICAM
ITGA5-1:ITGB1-1
HRAS-2:GDP
PLCG
HRAS-2:GTP
P-AKT
ITGA2-1:ITGB1-1:COL1
ITGA1-1:ITGB1-1:COL1
P-DOCK1-1
P-PTK2-1Y397
LAMA:LAMB:LAMC
KRAS-2:GTP
P-MAP4K5-1
ITGA4-3:ITGB7-1
ITGA5-1
P-PTK2-1
ITGA1-1:ITGB1-1:LAMA
ITGA2-1:ITGB1-1:COLL
MAP4K1-2
P-PLCG
PIK3CA-2:PIK3R1-1
ITGAV-1:ITGB6-1:TNC-
RAC1-1:GDP
DOCK1-1
P-RAPGEF1-1
ITGAV-1:ITGB3-1
ITGA2-1:ITGB1-1
ITGAV-1:ITGB6-1
Active-PI3K:P-PTK2-1
RHOA-1:GTP
P-MAP3K1-1
ITGA11-2:ITGB1-1:COL
ITGA6-2:ITGB1-1
CDC42-2:GTP
ITGAV-1:ITGB3-1:VTN-
Active-RAF1-1
ITGA6-2:ITGB4-3:LAMA
ILKAP-1:ILK-1
MAP3K1-1
ITGA6-2:ITGB4-3
AKT
RHOA-1:GDP
PTK2-1
KRAS-2:GDP
P-ILK-1
P-GSK3B-1
JUN-1

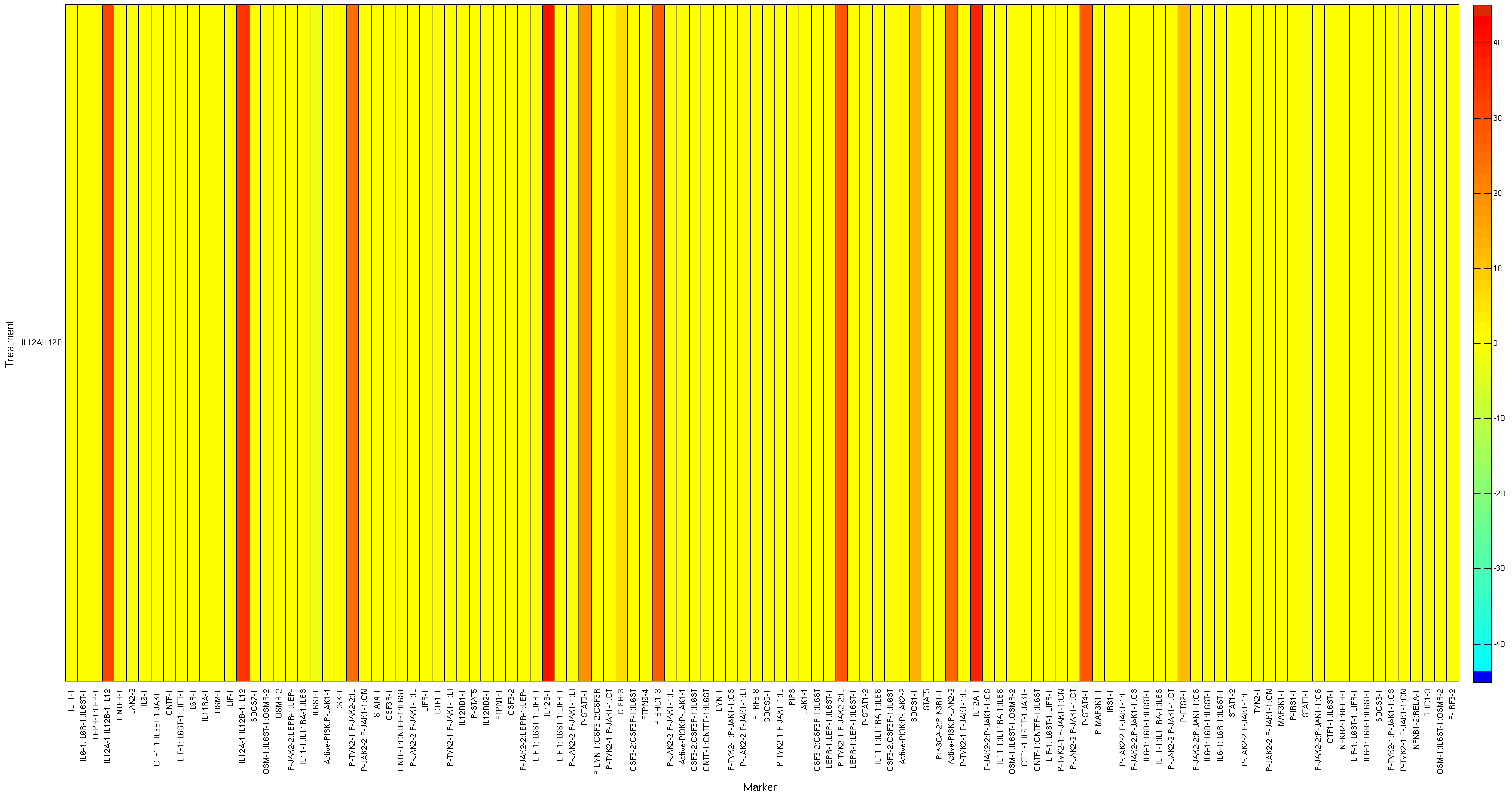
Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{J}$AG.tsv



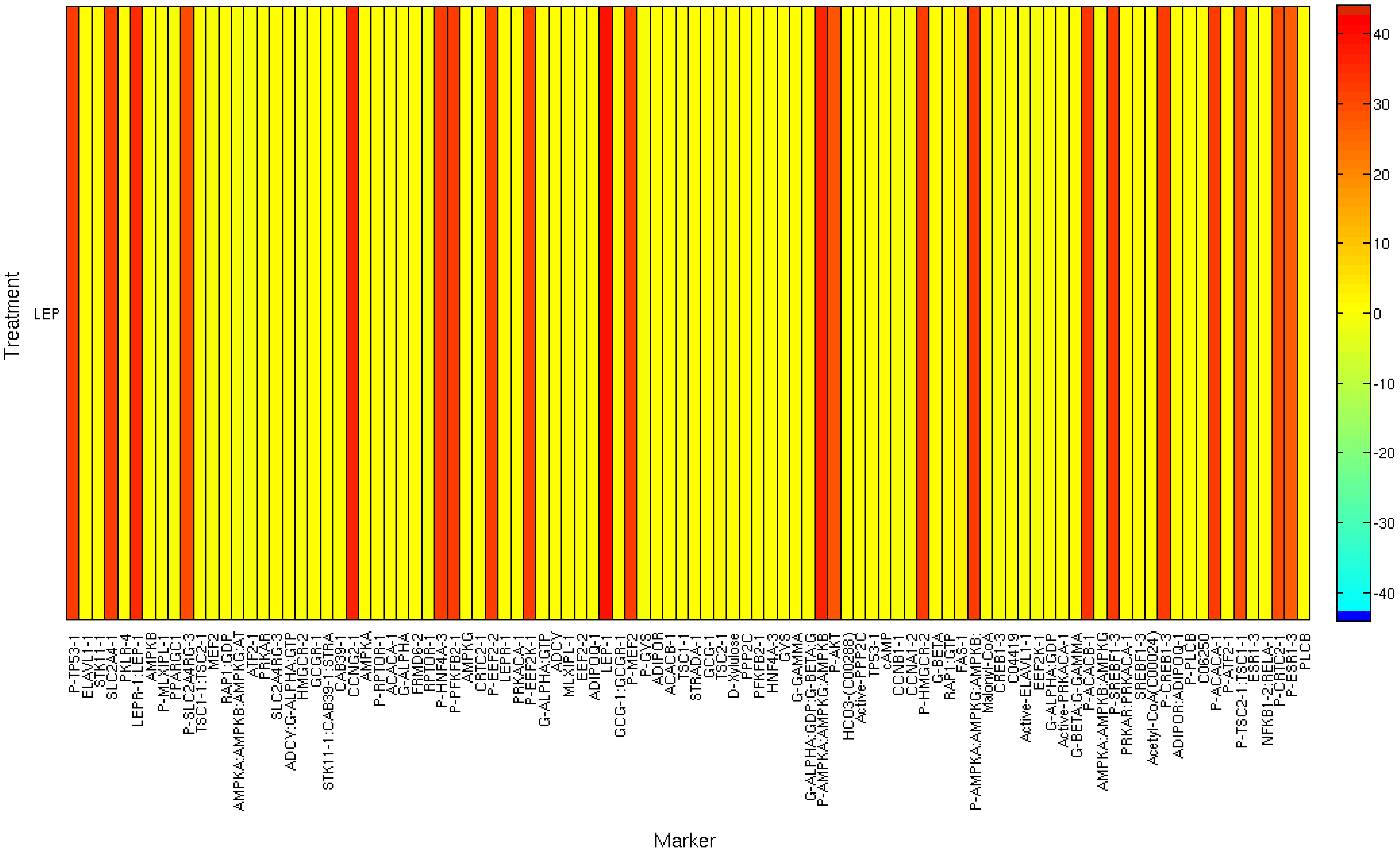

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_I$L10.tsv
Treatment
IL10
Marker:MSR1-1
Treatment:IL10
Ratio:2.2379
40
30
20
10
0
-10
-20
-30
-40
Marker
CISH-3
PTPRD-1
CCL2-1
TAP1-1
P-STAT1-2:IRF9-1:P-S
KPNA1-1
ISG15-1
JAK2-2
LY6E-1
IL1R1-9
TRH-1
CCND1-1
FCER2-1
BACE1-1
CD274-1
IFNB1-1
IL10-1
STAT6-1
TWIST1-3
MMP1-1
IL1
IFNA:IFNAR1-2:IFNAR2
MVP-1
REG1A-2
CCL17-1
S100P-1
SOAT1-1
CRP-1
IFNB1-1:IFNAR1-2:IFN
CYBB-1
P-STAT2-1dimer
P-EGFR-5:EGF-2dimer
P-STAT1-2dimer
IFNAR1-2
IFNGR2-2
IAP
AGT-1
Active-PI3K:P-JAK1-1
VIP-1
P-STAT4-1dimer
IDO1-1
IRF9-1
STAT5
PTPN6-4
IRF4-1
P-STAT2-1dimer:PIAS
P-STAT5
IVL-1
BCL2-1
MUC1-1
P-JUN-1:P-FOS-1
WARS-1
PIM1-1
STAT2-1
HLA-E-1
P-STAT3-1dimer
IL1RN-8
P-STAT5dimer
JAK1-1
S100A10-1
MMP2-2
MCL1-1
IFNGR1-1
CCR5-1
P-STAT3-1
MYC-2
IL10-1:IL10RA-1:IL10
BCL2L1-1
JAK3-1
P-JAK2-2:P-JAK1-1:IF
STAT3-1
TIMP1-1
IL10RA-1
P-JAK2-2:P-JAK1-1:IF
P-JAK2-2:P-JAK1-1:EG
CD40-1
FCGRT-1
IFNG-1
MYD88-1
SH2B2-3
CD8BEGIN
CCL26-1
P-JAK2-2:P-JAK1-1:EG
IFNA:IFNAR1-2:IFNAR2
IL10RB-1
STAT1-2
XAF1-3
P-SHC1-3
GBP1-1
MSR1-1
FCGR1A-2
IRF7-2
SOCS1-1
NOX1-1
P-EGFR-5:TGFA-1dime
IFNA
Active-PI3K:P-JAK1-1
ZNF148-1
P-STAT6-1dimer
IFNG-1:IFNGR1-1:IFNG
SELP-3
IFNAR2-3
RAN-1
P-STAT3-1dimer:PIAS
P-TYK2-1:P-JAK1-1:IF
IFNA:IFNAR1-2:IFNAR2
OPRM1-1
IL21-1
TYK2-1
FGG-5
SOCS3-1
CIITA-1
LTC4S-3
PIAS
SOCS5-1
PIP3
P-SP1-1
P-TYK2-1:P-JAK1-1:IF
P-STAT1-2dimer:PIAS
P-STAT1-2
IL10-1:IL10RA-1:IL10
P-PTPN11-3
PIK3CA-2:PIK3R1-1
CDKN1A-2
SP3-1
IRF1-1
FAAH-1
ICAM1-3
IL6ST-1
P-mut-EGFR(ConstAct)
IL2RA-1
P-SMAD23:SMAD4-1:E2
IFNB1-1:IFNAR1-2:IFN
P-EGFR-5:EGF-2dimer
P-MYC-2:ZBTB17-1
CCL19-1
IFNG-1:IFNGR1-1:IFNG
PRF1-1
P-STAT4-1
NOS3-1
IRS1-1
HMOX1-2
STAT4-1
IFNB1-1:IFNAR1-2:IFN
FOS-1
CYP19A1-1
CYSLTR1-1
P-STAT2-1
P-IRS1-1
IL10-1:IL10RA-1:IL10
MMP2-1
VEGFA-7
NOS2-1
VIM-4
P-EGFR-5:TGFA-1dime
P-STAT4-1dimer:PIAS
P-EGFR-5:EGF-2dimer
P-TYK2-1:P-JAK1-1:IL
SHC1-3
P-STAT5dimer:PIAS


Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_I$L11.tsv
Treatment
IL11
Marker
40
30
20
10
0
-10
-20
-30
-40
CISH-3
PTPRD-1
CCL2-1
TAP1-1
P-STAT1-2:IRF9-1:P-S
KPNA1-1
ISG15-1
JAK2-2
LY6E-1
IL1R1-9
TRH-1
CCND1-1
FCER2-1
BACE1-1
CD274-1
IFNB1-1
IL10-1
STAT6-1
TWIST1-3
MMP1-1
IL1
IFNA:IFNAR1-2:IFNAR2
MVP-1
REG1A-2
CCL17-1
S100P-1
SOAT1-1
CRP-1
IFNB1-1:IFNAR1-2:IFN
CYBB-1
P-STAT2-1dimer
P-EGFR-5:EGF-2dimer
P-STAT1-2dimer
IFNAR1-2
IFNGR2-2
IAP
AGT-1
Active-PI3K:P-JAK1-1
VIP-1
P-STAT4-1dimer
IDO1-1
IRF9-1
STAT5
PTPN6-4
IRF4-1
P-STAT2-1dimer:PIAS
P-STAT5
IVL-1
BCL2-1
MUC1-1
P-JUN-1:P-FOS-1
WARS-1
PIM1-1
STAT2-1
HLA-E-1
P-STAT3-1dimer
IL1RN-8
P-STAT5dimer
JAK1-1
S100A10-1
MMP2-2
MCL1-1
IFNGR1-1
CCR5-1
P-STAT3-1
MYC-2
P-mut-EGFR(ConstAct)
IL10-1:IL10RA-1:IL10
BCL2L1-1
JAK3-1
P-JAK2-2:P-JAK1-1:IF
STAT3-1
TIMP1-1
IL10RA-1
P-JAK2-2:P-JAK1-1:mu
P-JAK2-2:P-JAK1-1:IF
P-mut-EGFR(ConstAct)
P-JAK2-2:P-JAK1-1:EG
CD40-1
FCGRT-1
IFNG-1
MYD88-1
SH2B2-3
CD8BEGIN
CCL26-1
P-JAK2-2:P-JAK1-1:EG
IFNA:IFNAR1-2:IFNAR2
IL10RB-1
STAT1-2
XAF1-3
P-SHC1-3
GBP1-1
MSR1-1
FCGR1A-2
IRF7-2
SOCS1-1
NOX1-1
P-EGFR-5:TGFA-1dime
IFNA
Active-PI3K:P-JAK1-1
ZNF148-1
P-STAT6-1dimer
IFNG-1:IFNGR1-1:IFNG
SELP-3
IFNAR2-3
RAN-1
P-STAT3-1dimer:PIAS
P-TYK2-1:P-JAK1-1:IF
IFNA:IFNAR1-2:IFNAR2
OPRM1-1
IL21-1
TYK2-1
FGG-5
SOCS3-1
CIITA-1
LTC4S-3
PIAS
SOCS5-1
PIP3
P-SP1-1
P-TYK2-1:P-JAK1-1:IF
P-STAT1-2dimer:PIAS
P-STAT1-2
IL10-1:IL10RA-1:IL10
P-PTPN11-3
PIK3CA-2:PIK3R1-1
CDKN1A-2
SP3-1
IRF1-1
FAAH-1
ICAM1-3
IL6ST-1
P-mut-EGFR(ConstAct)
IL2RA-1
P-SMAD23:SMAD4-1:E2
IFNB1-1:IFNAR1-2:IFN
P-EGFR-5:EGF-2dimer
P-MYC-2:ZBTB17-1
CCL19-1
IFNG-1:IFNGR1-1:IFNG
PRF1-1
P-STAT4-1
NOS3-1
IRS1-1
HMOX1-2
STAT4-1
IFNB1-1:IFNAR1-2:IFN
FOS-1
CYP19A1-1
CYSLTR1-1
P-STAT2-1
P-IRS1-1
IL10-1:IL10RA-1:IL10
MMP2-1
VEGFA-7
NOS2-1
VIM-4
P-EGFR-5:TGFA-1dime
P-STAT4-1dimer:PIAS
P-EGFR-5:EGF-2dimer
P-TYK2-1:P-JAK1-1:IL
SHC1-3
P-STAT5dimer:PIAS

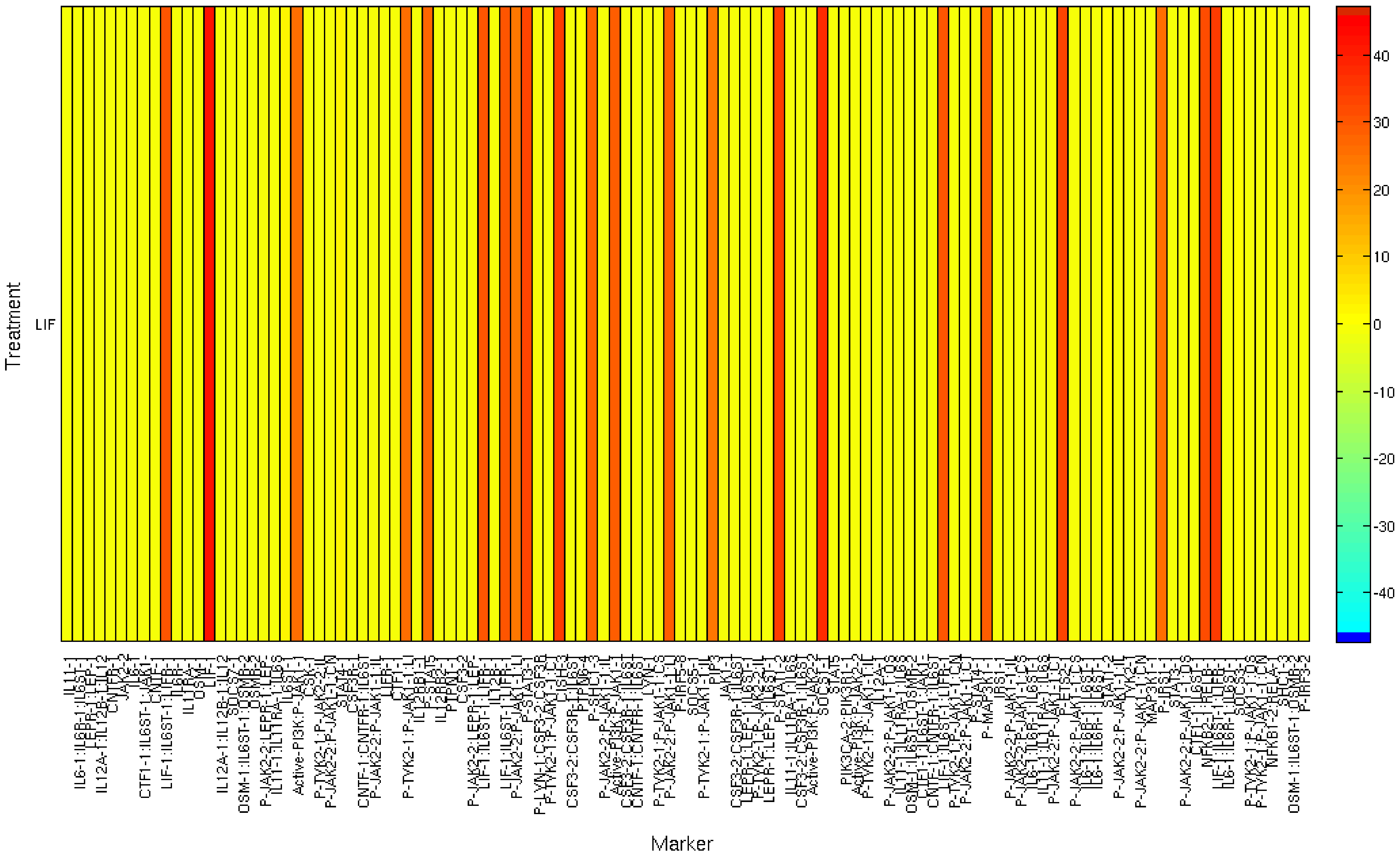
Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{I}$L12A.tsv



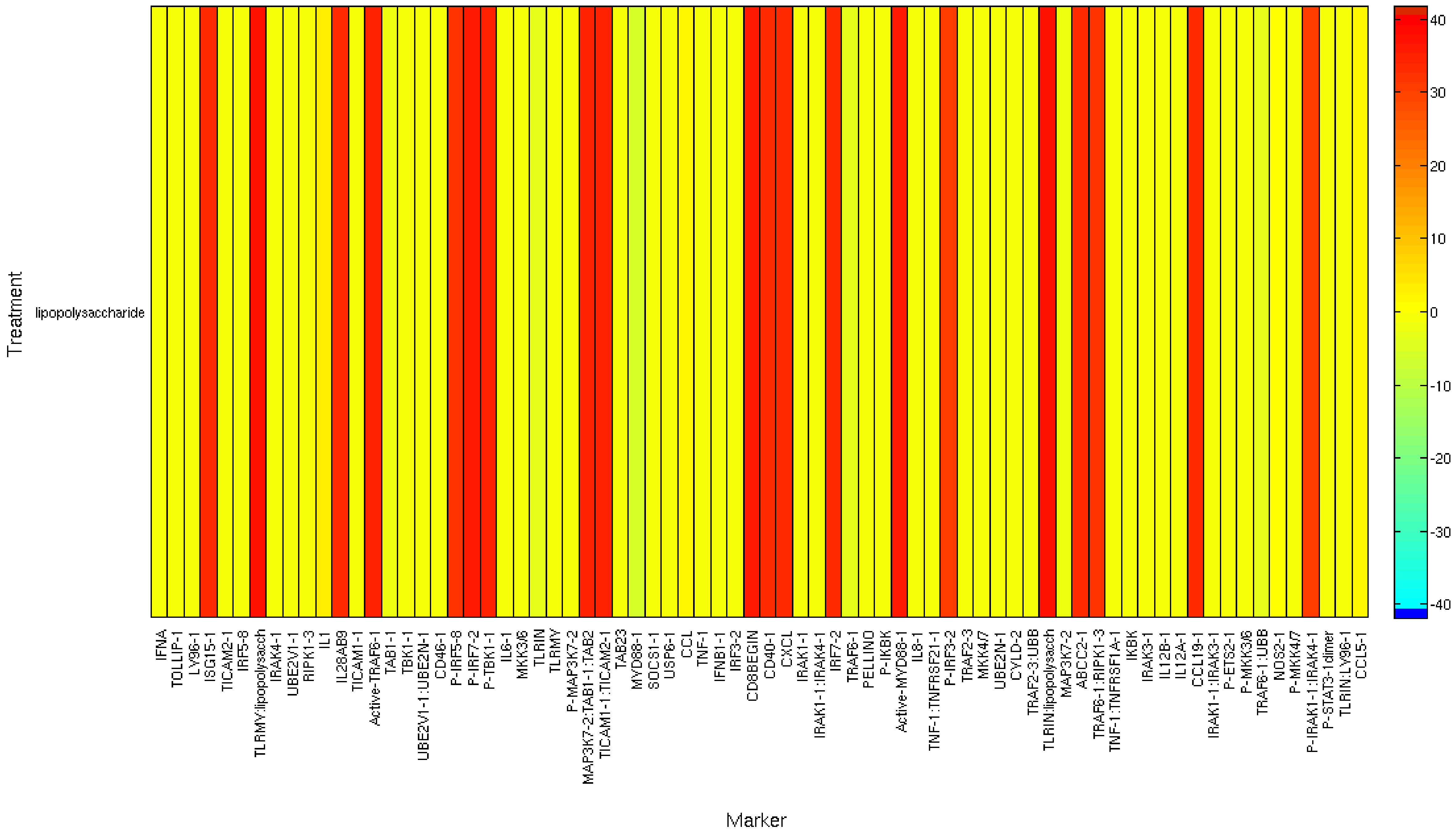
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_L$EP.tsv



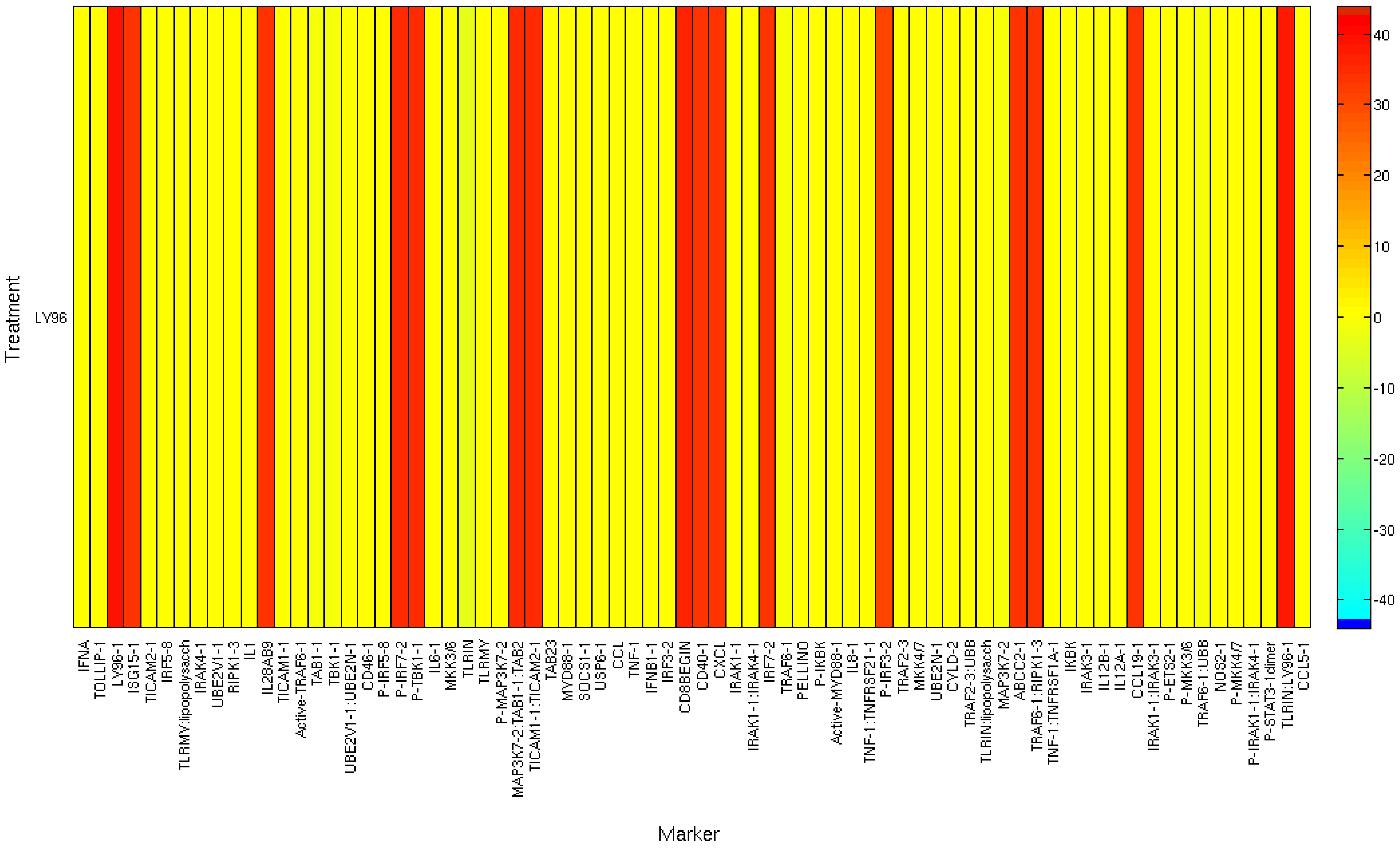
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_L$IF.tsv



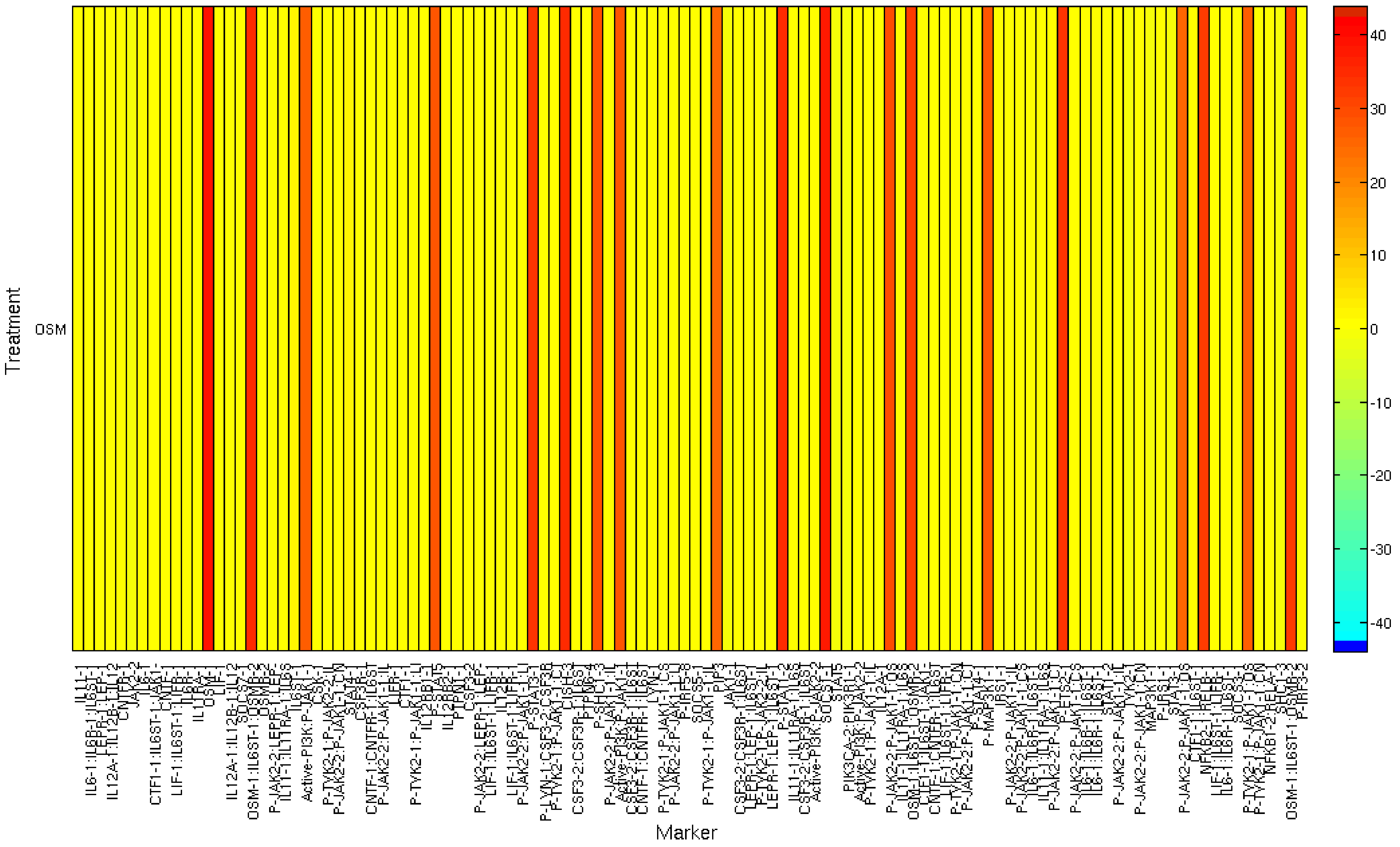
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_l$ipopolysaccharide.tsv



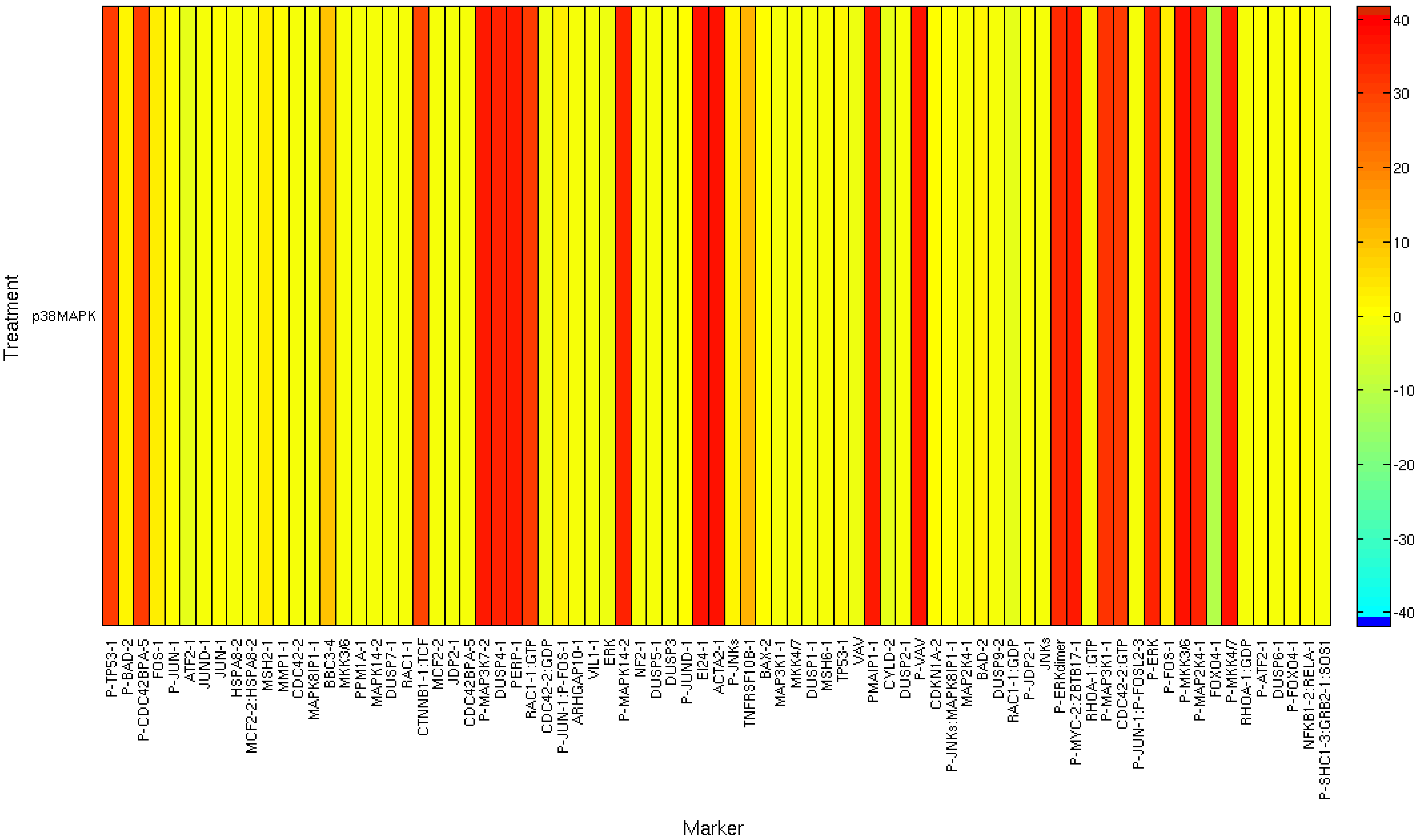
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_L$Y96.tsv



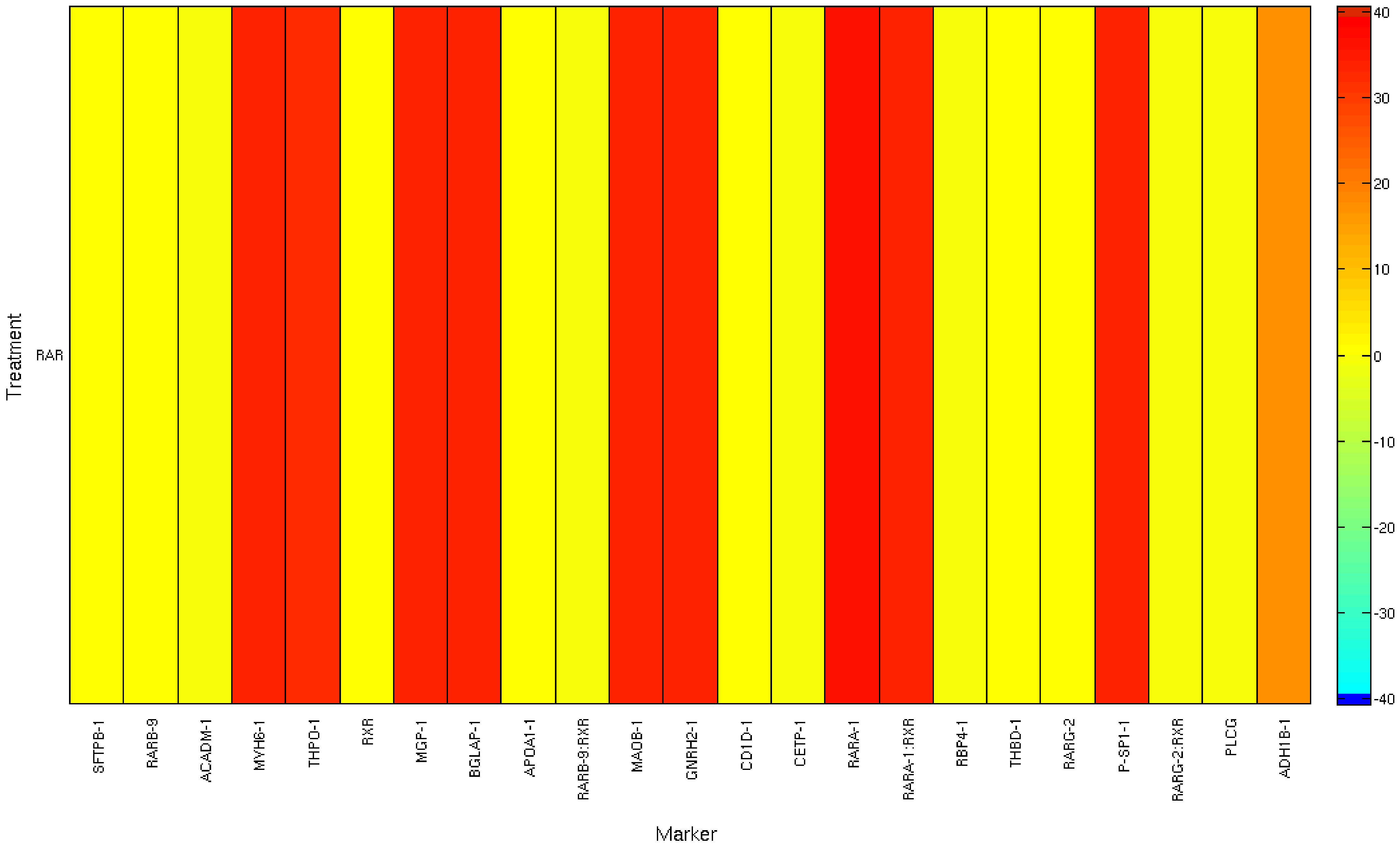
Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{O}$SM.tsv

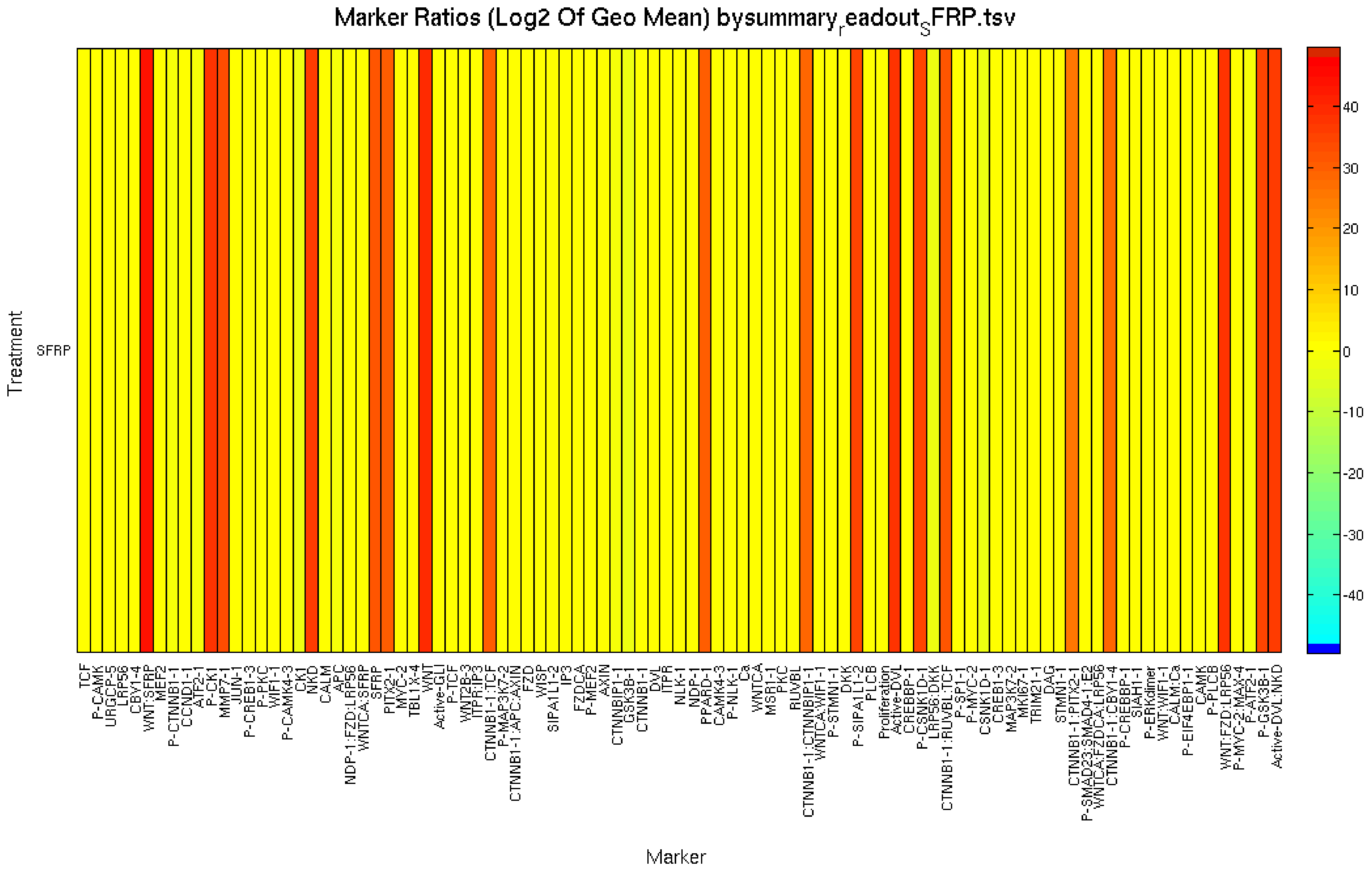


Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{p}$38MAPK.tsv

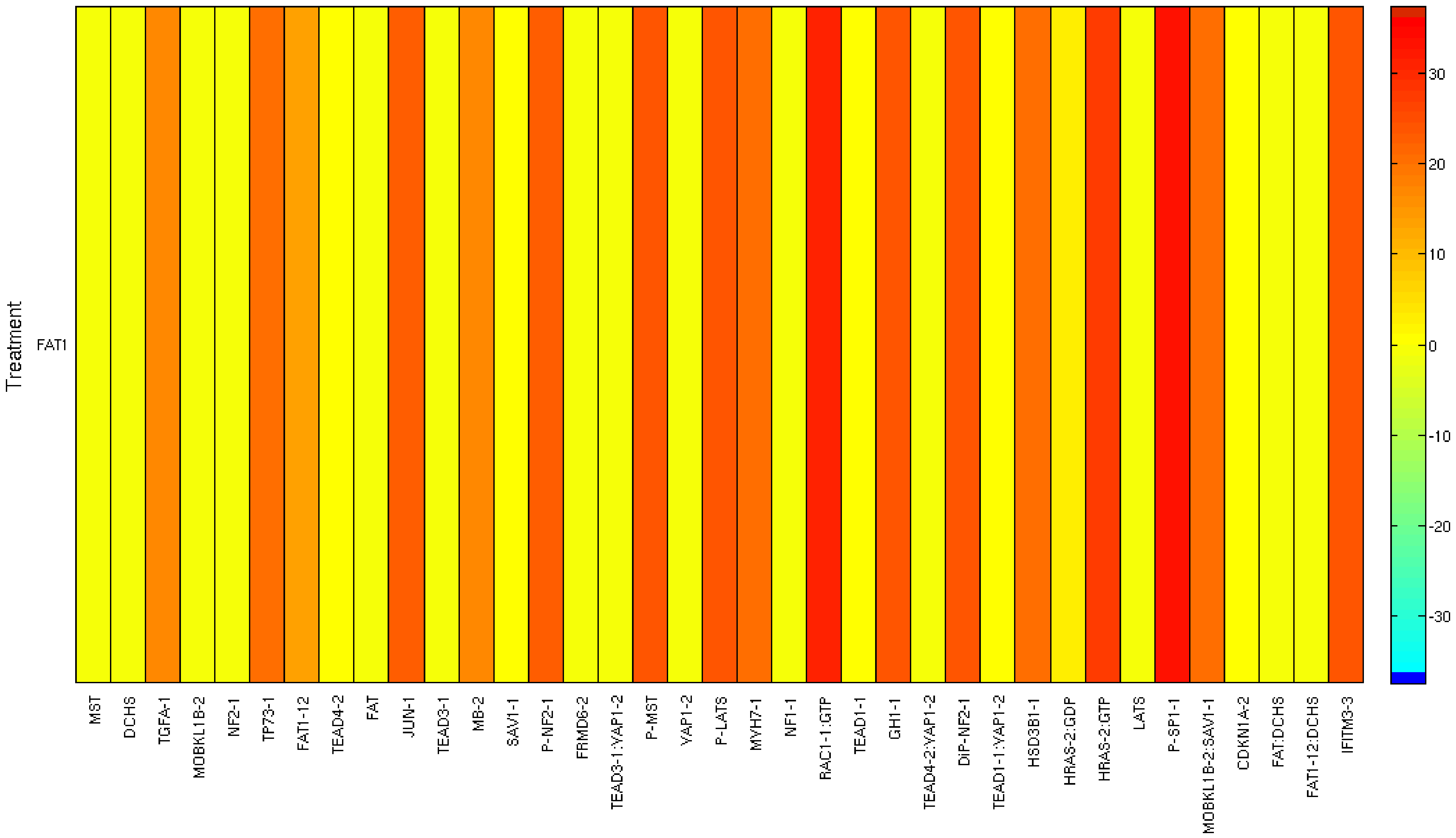


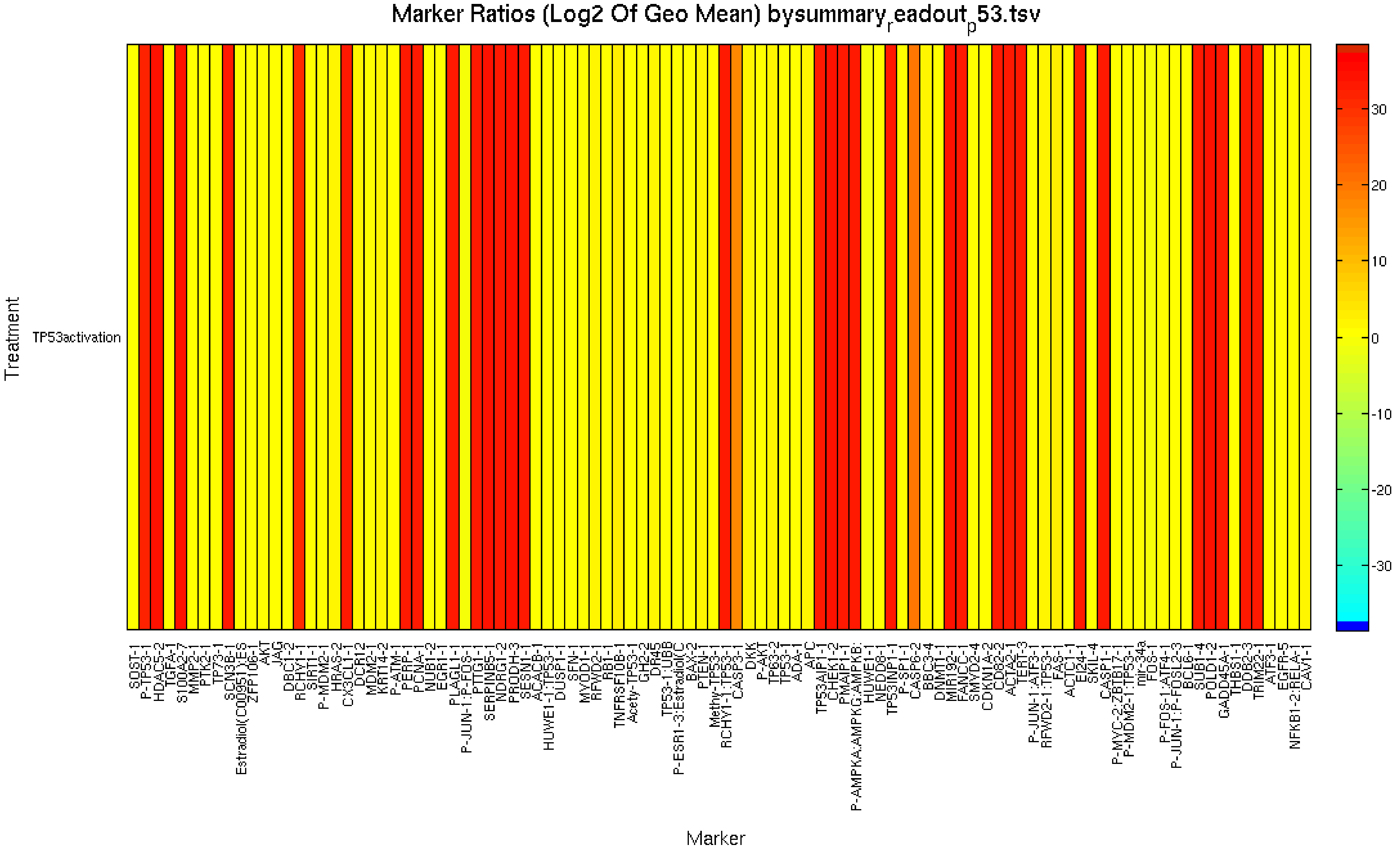
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_R$AR.tsv

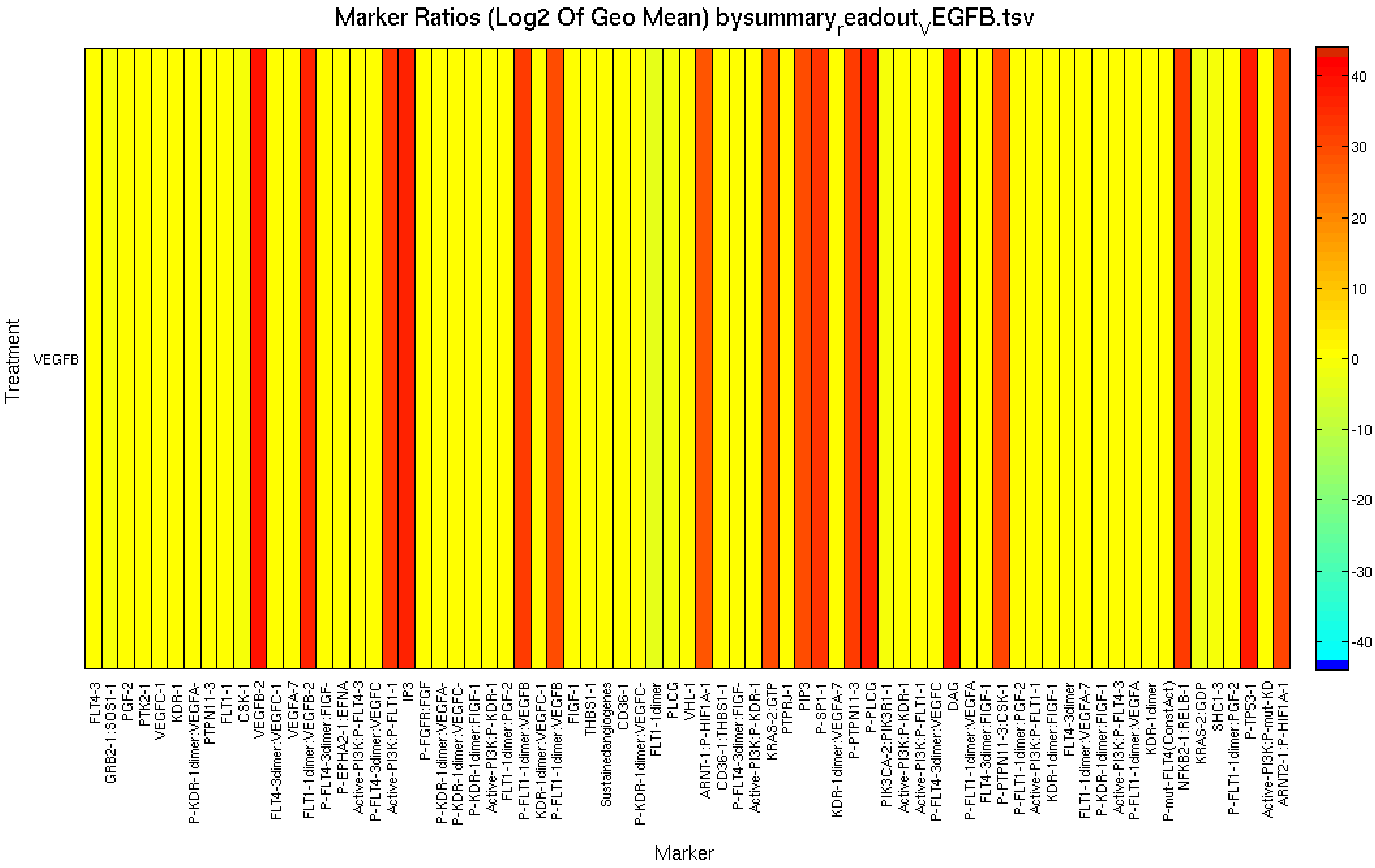



Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_S$FRP.tsv
Treatment
SFRP
Marker
TCF
P-CAMK
URGCP-5
LRP56
CBY1-4
WNT:SFRP
MEF2
P-CTNNB1-1
CCND1-1
ATF2-1
P-CK1
MMP7-1
JUN-1
P-CREB1-3
P-PKC
WIF1-1
P-CAMK4-3
CK1
NKD
CALM
APC
NDP-1:FZD:LRP56
WNTCA:SFRP
SFRP
PITX2-1
MYC-2
TBL1X-4
WNT
Active-GLI
P-TCF
WNT2B-3
ITPR:IP3
CTNNB1-1:TCF
P-MAP3K7-2
CTNNB1-1:APC:AXIN
FZD
WISP
SIPA1L1-2
IP3
FZDCA
P-MEF2
AXIN
CTNNBIP1-1
GSK3B-1
CTNNB1-1
DVL
ITPR
NLK-1
NDP-1
PPARD-1
CAMK4-3
P-NLK-1
Ca
WNTCA
MSR1-1
PKC
RUVBL
CTNNB1-1:CTNNBIP1-1
WNTCA:WIF1-1
P-STMN1-1
DKK
P-SIPA1L1-2
PLCB
Proliferation
Active-DVL
CREBBP-1
P-CSNK1D-1
LRP56:DKK
CTNNB1-1:RUVBL:TCF
P-SP1-1
P-MYC-2
CSNK1D-1
CREB1-3
MAP3K7-2
MKI67-1
TRIM21-1
DAG
STMN1-1
CTNNB1-1:PITX2-1
P-SMAD23:SMAD4-1:E2
WNTCA:FZDCA:LRP56
CTNNB1-1:CBY1-4
P-CREBBP-1
SIAH1-1
P-ERKdimer
WNT:WIF1-1
CALM:Ca
P-EIF4EBP1-1
CAMK
P-PLCB
WNT:FZD:LRP56
P-MYC-2:MAX-4
P-ATF2-1
P-GSK3B-1
Active-DVL:NKD
40
30
20
10
0
-10
-20
-30
-40

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_S$WH.tsv

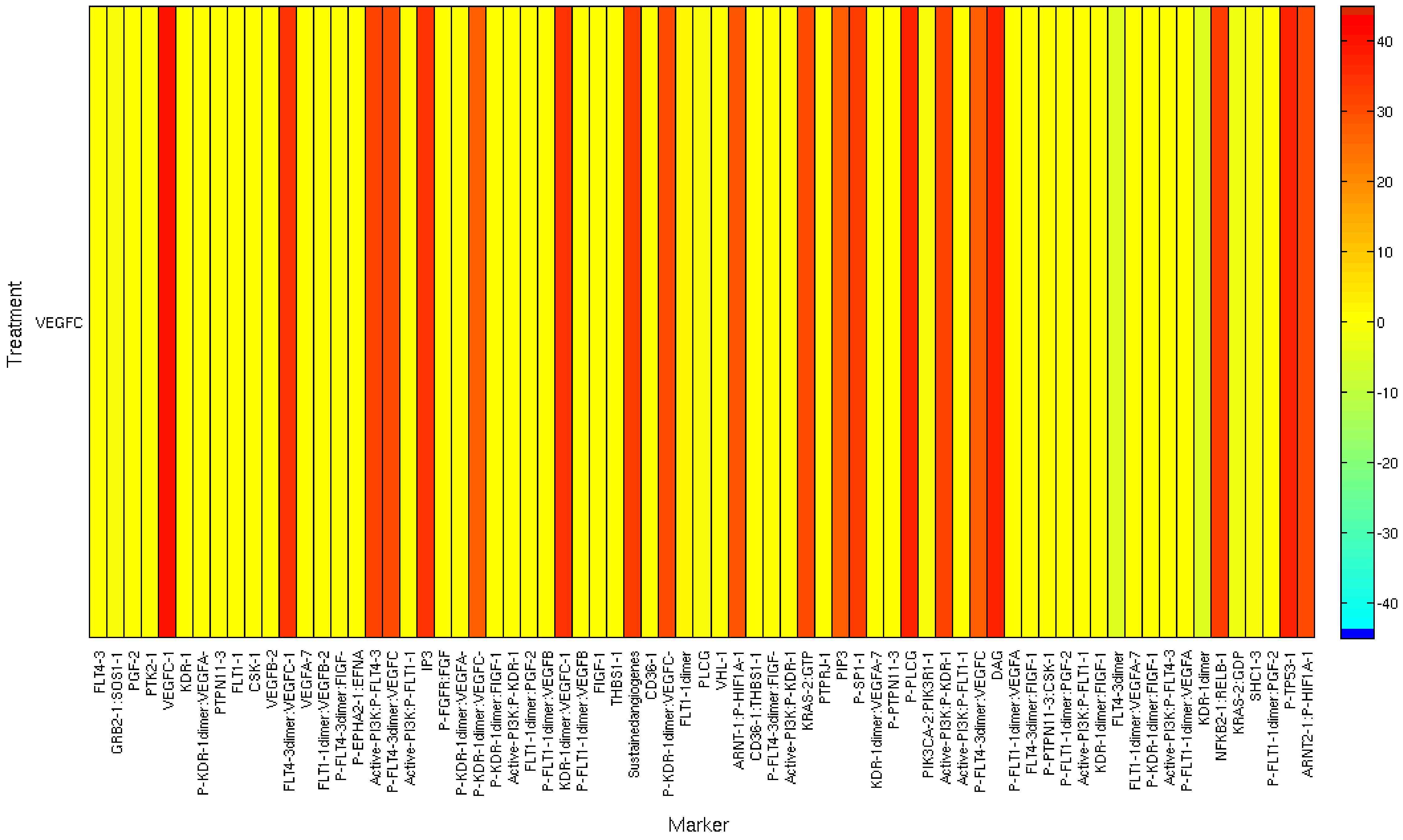


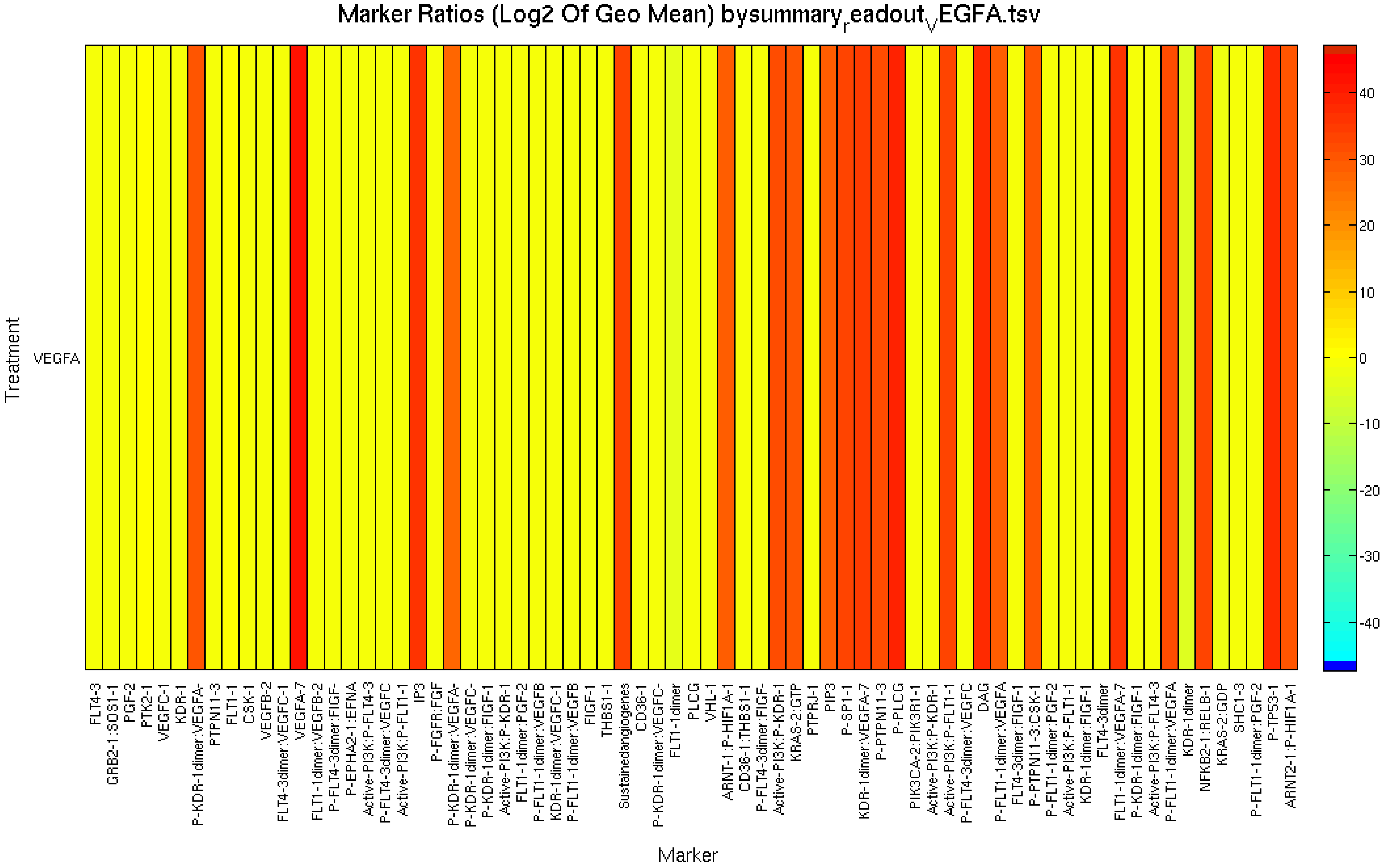

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_p53.tsv
Treatment
TP53activation
Marker
30
20
10
0
-10
-20
-30
SOST-1
P-TP53-1
HDAC5-2
TGFA-1
S100A2-7
MMP2-1
PTK2-1
TP73-1
SCN3B-1
Estradiol(C00951):ES
ZFP106-1
AKT
JAG
DBC1-2
RCHY1-1
SIRT1-1
P-MDM2-1
HRAS-2
CX3CL1-1
DCR12
MDM2-1
KRT14-2
P-ATM-1
PERP-1
PCNA-1
NUB1-2
EGR1-1
PLAGL1-1
P-JUN-1:P-FOS-1
PTTG1-1
SERPINB5-1
NDRG1-2
PRODH-3
SESN1-1
ACACB-1
HUWE1-1:TP53-1
DUSP1-1
SFN-1
MYOD1-1
RFWD2-1
RB1-1
TNFRSF10B-1
Acety-TP53-1
GH2-2
DR45
TP53-1:UBB
P-ESR1-3:Estradiol(C
BAX-2
PTEN-1
Methy-TP53-1
RCHY1-1:TP53-1
CASP3-1
DKK
P-AKT
TP63-2
TP53-1
ADA-1
APC
TP53AIP1-1
CHEK1-2
PMAIP1-1
P-AMPKA:AMPKG:AMPKB:
HUWE1-1
NEDD8-1
TP53INP1-1
P-SP1-1
CASP6-2
BBC3-4
DNMT1-1
MIR192-1
FANCC-1
SMYD2-4
CDKN1A-2
CD82-2
ACTA2-1
TERT-3
P-JUN-1:ATF3-1
RFWD2-1:TP53-1
FAS-1
ACTC1-1
EI24-1
SKIL-4
CASP1-1
P-MYC-2:ZBTB17-1
P-MDM2-1:TP53-1
mir-34a
FOS-1
P-FOS-1:ATF4-1
P-JUN-1:P-FOSL2-3
BCL6-1
SUB1-4
POLD1-2
GADD45A-1
THBS1-1
DDB2-3
TRIM22-1
ATF3-1
EGFR-5
NFKB1-2:RELA-1
CAV1-1

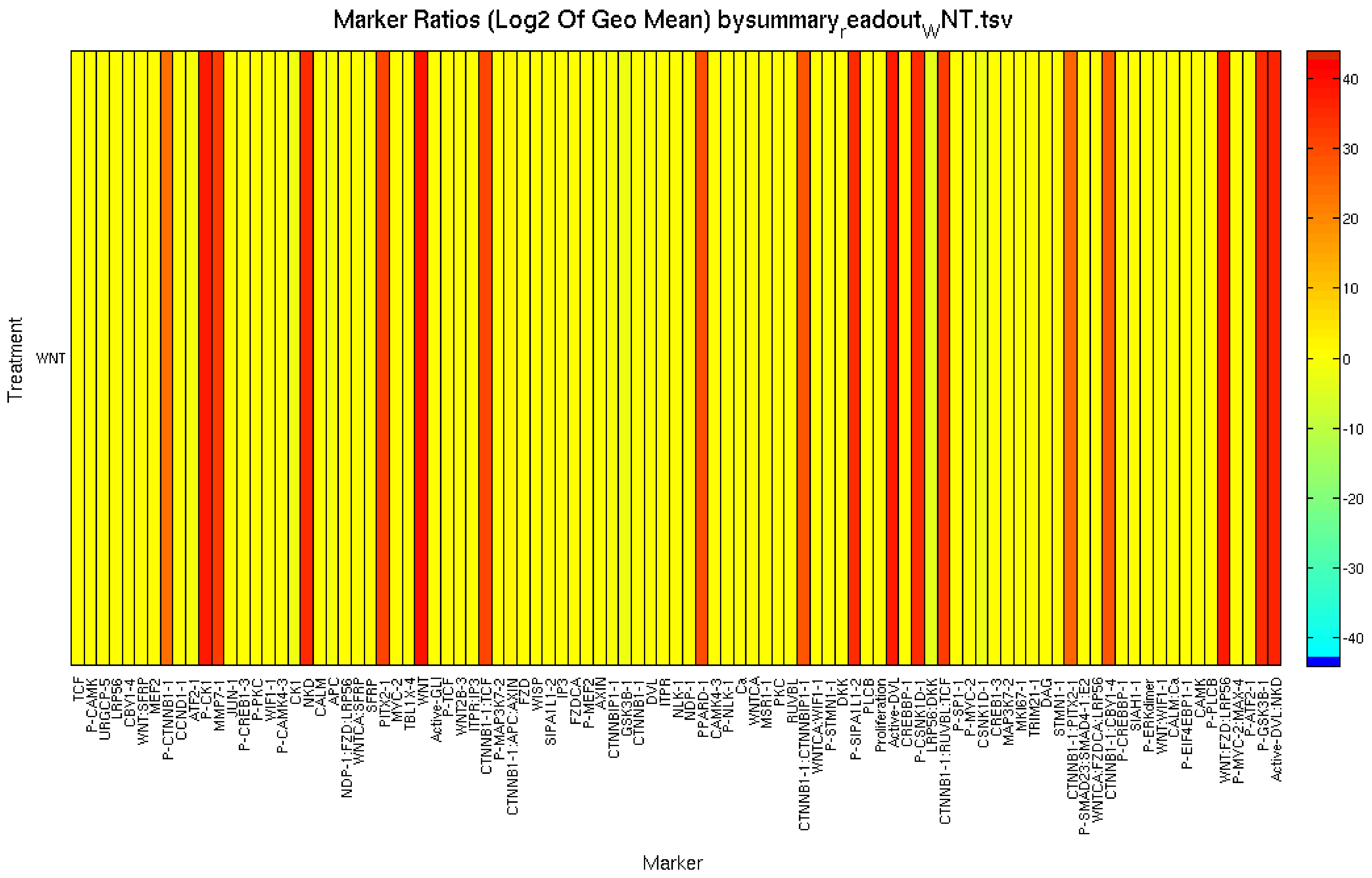


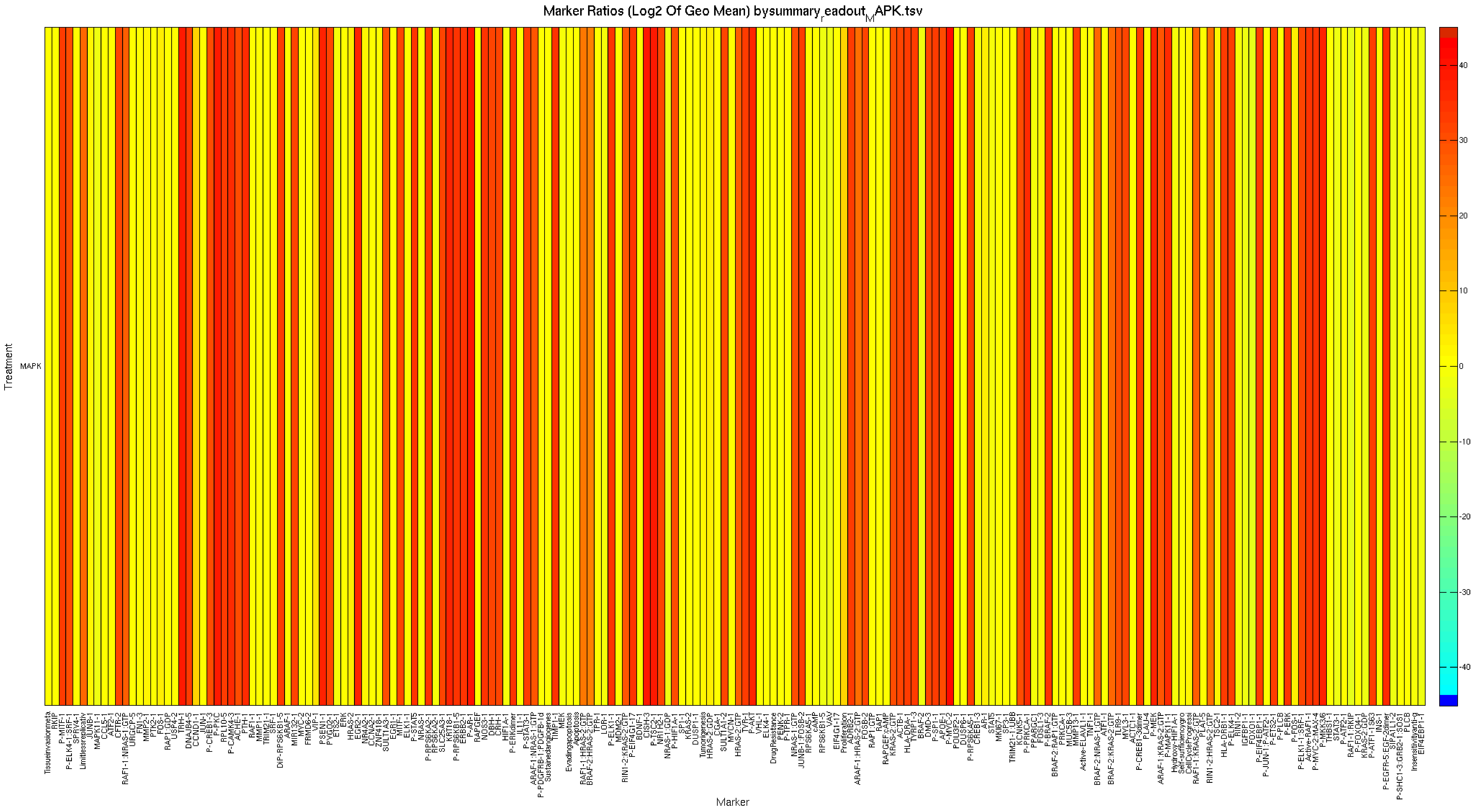
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_V$EGFB.tsv

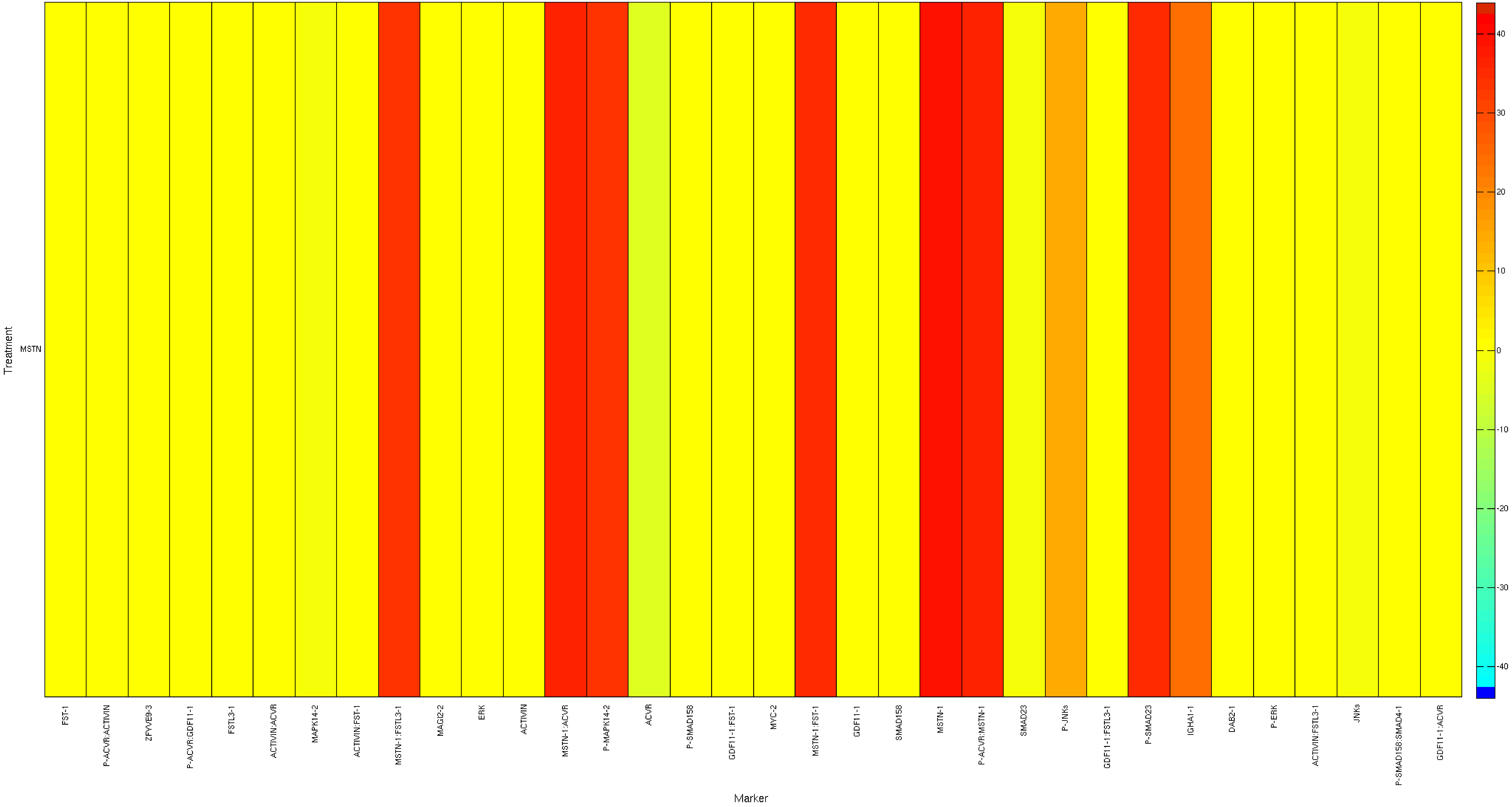
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_V$EGFC.tsv




Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_V$EGFA.tsv
Treatment
VEGFA
Marker
FLT4-3
GRB2-1:SOS1-1
PGF-2
PTK2-1
VEGFC-1
KDR-1
P-KDR-1dimer:VEGFA-
PTPN11-3
FLT1-1
CSK-1
VEGFB-2
FLT4-3dimer:VEGFC-1
VEGFA-7
FLT1-1dimer:VEGFB-2
P-FLT4-3dimer:FIGF-
P-EPHA2-1:EFNA
Active-PI3K:P-FLT4-3
P-FLT4-3dimer:VEGFC
Active-PI3K:P-FLT1-1
IP3
P-FGFR:FGF
P-KDR-1dimer:VEGFA-
P-KDR-1dimer:VEGFC-
P-KDR-1dimer:FIGF-1
Active-PI3K:P-KDR-1
FLT1-1dimer:PGF-2
P-FLT1-1dimer:VEGFB
KDR-1dimer:VEGFC-1
P-FLT1-1dimer:VEGFB
FIGF-1
THBS1-1
Sustainedangiogenes
CD36-1
P-KDR-1dimer:VEGFC-
FLT1-1dimer
PLCG
VHL-1
ARNT-1:P-HIF1A-1
CD36-1:THBS1-1
P-FLT4-3dimer:FIGF-
Active-PI3K:P-KDR-1
KRAS-2:GTP
PTPRJ-1
PIP3
P-SP1-1
KDR-1dimer:VEGFA-7
P-PTPN11-3
P-PLCG
PIK3CA-2:PIK3R1-1
Active-PI3K:P-KDR-1
Active-PI3K:P-FLT1-1
P-FLT4-3dimer:VEGFC
DAG
P-FLT1-1dimer:VEGFA
FLT4-3dimer:FIGF-1
P-PTPN11-3:CSK-1
P-FLT1-1dimer:PGF-2
Active-PI3K:P-FLT1-1
KDR-1dimer:FIGF-1
FLT4-3dimer
FLT1-1dimer:VEGFA-7
P-KDR-1dimer:FIGF-1
Active-PI3K:P-FLT4-3
P-FLT1-1dimer:VEGFA
KDR-1dimer
NFKB2-1:RELB-1
KRAS-2:GDP
SHC1-3
P-FLT1-1dimer:PGF-2
P-TP53-1
ARNT2-1:P-HIF1A-1
40
30
20
10
0
-10
-20
-30
-40

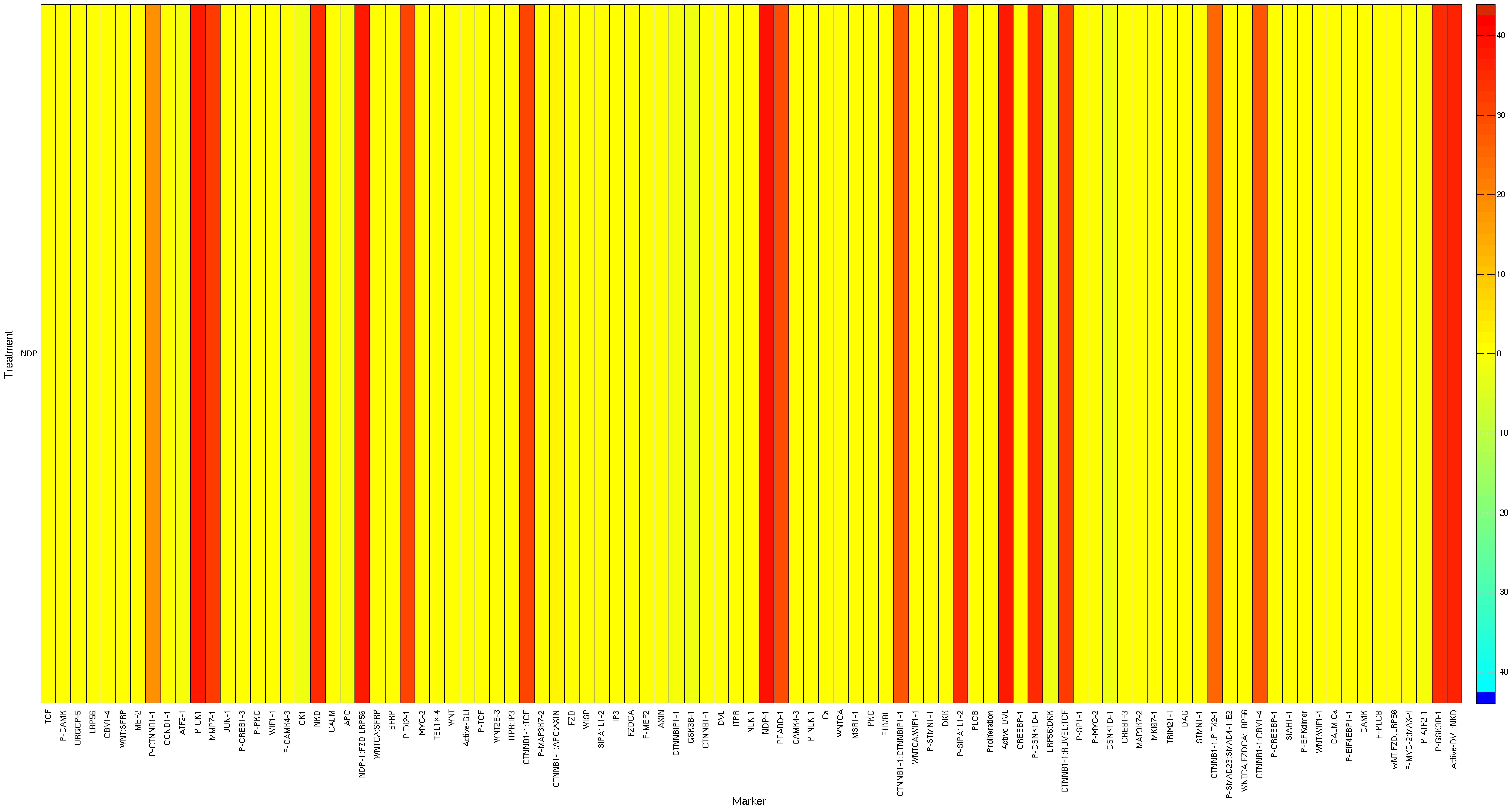

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_W$NT.tsv
Treatment
WNT
40
30
20
10
0
-10
-20
-30
-40
TCF
P-CAMK
URGCP-5
LRP56
CBY1-4
WNT:SFRP
MEF2
P-CTNNB1-1
CCND1-1
ATF2-1
P-CK1
MMP7-1
JUN-1
P-CREB1-3
P-PKC
WIF1-1
P-CAMK4-3
CK1
NKD
CALM
APC
NDP-1:FZD:LRP56
WNTCA:SFRP
SFRP
PITX2-1
MYC-2
TBL1X-4
WNT
Active-GLI
P-TCF
WNT2B-3
ITPR:IP3
CTNNB1-1:TCF
P-MAP3K7-2
CTNNB1-1:APC:AXIN
FZD
WISP
SIPA1L1-2
IP3
FZDCA
P-MEF2
AXIN
CTNNBIP1-1
GSK3B-1
CTNNB1-1
DVL
ITPR
NLK-1
NDP-1
PPARD-1
CAMK4-3
P-NLK-1
Ca
WNTCA
MSR1-1
PKC
RUVBL
CTNNB1-1:CTNNBIP1-1
WNTCA:WIF1-1
P-STMN1-1
DKK
P-SIPA1L1-2
PLCB
Proliferation
Active-DVL
CREBBP-1
P-CSNK1D-1
LRP56:DKK
CTNNB1-1:RUVBL:TCF
P-SP1-1
P-MYC-2
CSNK1D-1
CREB1-3
MAP3K7-2
MKI67-1
TRIM21-1
DAG
STMN1-1
CTNNB1-1:PITX2-1
P-SMAD23:SMAD4-1:E2
WNTCA:FZDCA:LRP56
CTNNB1-1:CBY1-4
P-CREBBP-1
SIAH1-1
P-ERKdimer
WNT:WIF1-1
CALM:Ca
P-EIF4EBP1-1
CAMK
P-PLCB
WNT:FZD:LRP56
P-MYC-2:MAX-4
P-ATF2-1
P-GSK3B-1
Active-DVL:NKD
Marker

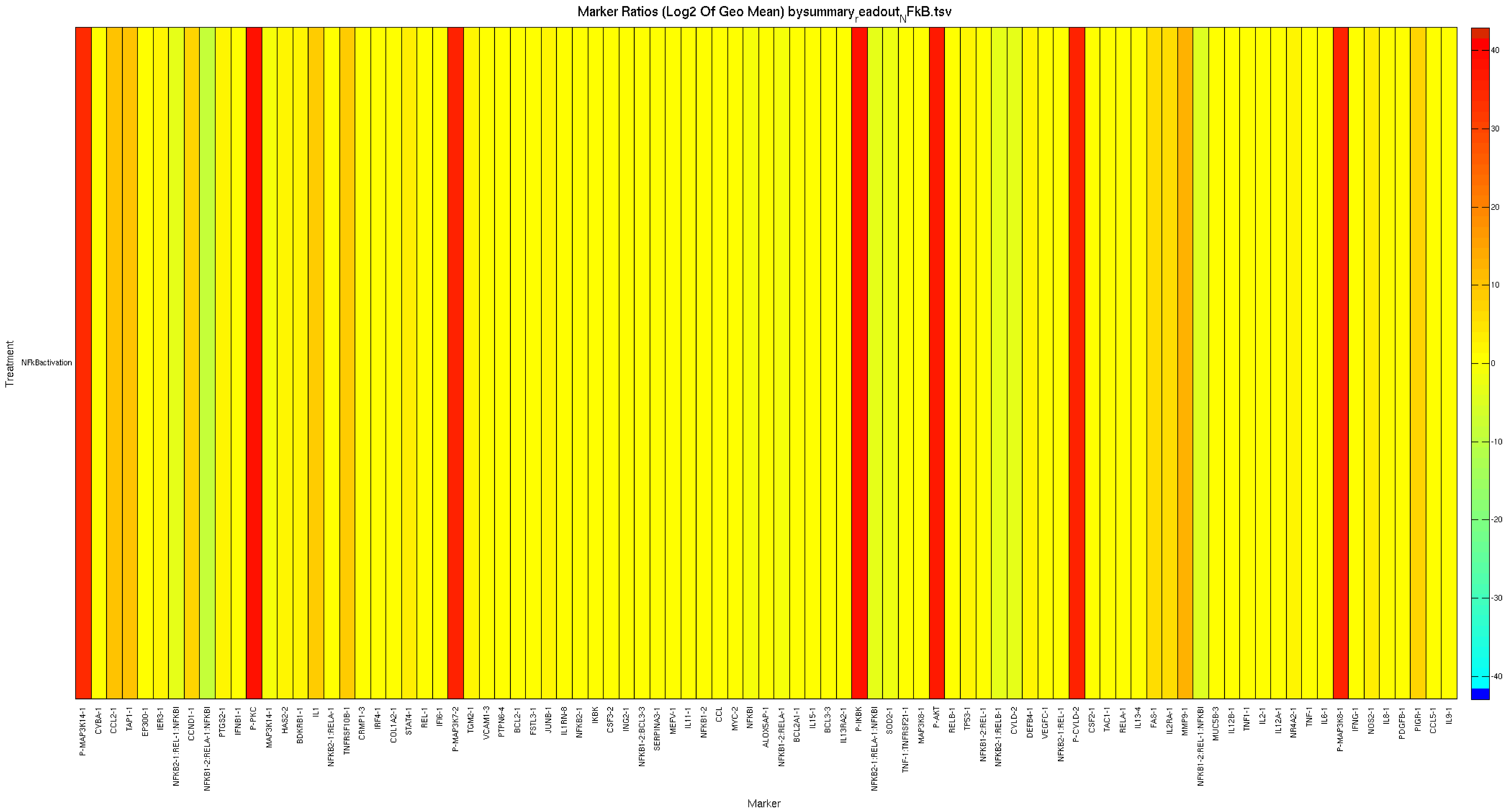

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_M$APK.tsv
Treatment
MAPK
Marker
40
30
20
10
0
-10
-20
-30
-40
Tissueinvasionmeta
RKIP
P-MITF-1
P-ELK4-1:SRF-1
SPRY4-1
Limitlessreplicativ
JUNB-1
MAPK11-1
CCL5-1
ATF2-1
CFTR-2
RAF1-1:NRAS-1:GTP
URGCP-5
FN1-3
MMP2-1
PTK2-1
FOS-1
RAP1:GDP
USP4-2
TRH-1
DNAJB4-5
CCND1-1
JUN-1
P-CREB1-3
P-PKC
RPL10-5
P-CAMK4-3
ACHE-1
PTH-1
RAF1-1
MMP1-1
TRIM21-1
SRF-1
DiP-RPS6KB1-5
ARAF-1
MIR132-1
MYC-2
FRMD6-2
VIP-1
PSEN1-1
PYGO2-1
ETS2-1
ERK
HRAS-2
EGR2-1
NR4A2-1
CCNA2-1
ZNF418-1
SULT1A3-1
EGR1-1
MITF-1
ELK1-1
P-STAT5
NRAS-1
P-RPS6KA2-1
RPS6KA2-1
SLC25A3-1
KRT18-1
P-RPS6KB1-5
ERBB2-1
P-AR-1
RAPGEF
NOS3-1
DBH-1
CRH-1
HIF1A-1
P-ERKdimer
IL11-1
P-STAT3-1
ARAF-1:NRAS-1:GTP
P-PDGFRB-1:PDGFB-1d
Sustainedangiogenes
TIMP1-1
MEK
Evadingapoptosis
Apoptosis
RAF1-1:HRAS-2:GTP
BRAF-2:HRAS-2:GTP
TPR-1
LOR-1
P-ELK1-1
MDM2-1
RIN1-2:KRAS-2:GTP
P-EIF4G1-17
BDNF-1
CISH-3
P-TSC2-1
NR1H2-1
NRAS-1:GDP
P-HIF1A-1
SP1-1
KRAS-2
DUSP1-1
Tumorigenesis
HRAS-2:GDP
CGA-1
SULT1A1-2
MYCN-1
HRAS-2:GTP
TYR-1
P-AKT
VHL-1
ELK4-1
DrugResistance
PENK-2
P-TPR-1
NRAS-1:GTP
JUNB-1:FOSB-2
RPS6KA5-1
cAMP
RPS6KB1-5
VAV
EIF4G1-17
Proliferation
ADRB2-1
ARAF-1:HRAS-2:GTP
FOSB-2
RAP1:GTP
RAP1
RAPGEF:cAMP
KRAS-2:GTP
ACTB-1
HLA-DRA-1
TYRP1-3
BRAF-2
DMD-3
P-SP1-1
APOE-1
P-MYC-2
POU3F2-1
DUSP6-1
P-RPS6KA5-1
CREB1-3
AR-1
STAT5
MKI67-1
SP3-1
TRIM21-1:UBB
KCNK5-1
P-PRKCA-1
PPARGC1-1
FOSL1-3
P-BRAF-2
BRAF-2:RAP1:GTP
PRKCA-1
MUC5B-3
MMP13-1
Active-ELAVL1-1
TNF1-1
BRAF-2:NRAS-1:GTP
ATF1-1
BRAF-2:KRAS-2:GTP
TLR9-1
MYL3-1
ACTC1-1
P-CREB1-3dimer
PLAU-4
P-MEK
ARAF-1:KRAS-2:GTP
P-MAPK11-1
Hydroxy-HIF1A-1
Self-sufficiencygro
CellCycleProgressi
RAF1-1:KRAS-2:GTP
PLAT-5
RIN1-2:HRAS-2:GTP
TSC2-1
HLA-DRB1-1
P-ELK4-1
RIN1-2
IGFBP1-1
FOXO1-1
P-EIF4EBP1-1
P-JUN-1:P-ATF2-1
P-ETS2-1
P-PLCB
P-ERK
P-FOS-1
P-ELK1-1:SRF-1
Active-RAF1-1
P-MYC-2:MAX-4
P-MKK3/6
THBS1-1
STAT3-1
P-ATF2-1
RAF1-1:RKIP
P-FOXO4-1
KRAS-2:GDP
P-ATF1-1S63
INS-1
P-EGFR-5:EGF-2dimer
SIPA1L1-2
P-SHC1-3:GRB2-1:SOS1
PLCB
Insensitivityanti-g
EIF4EBP1-1

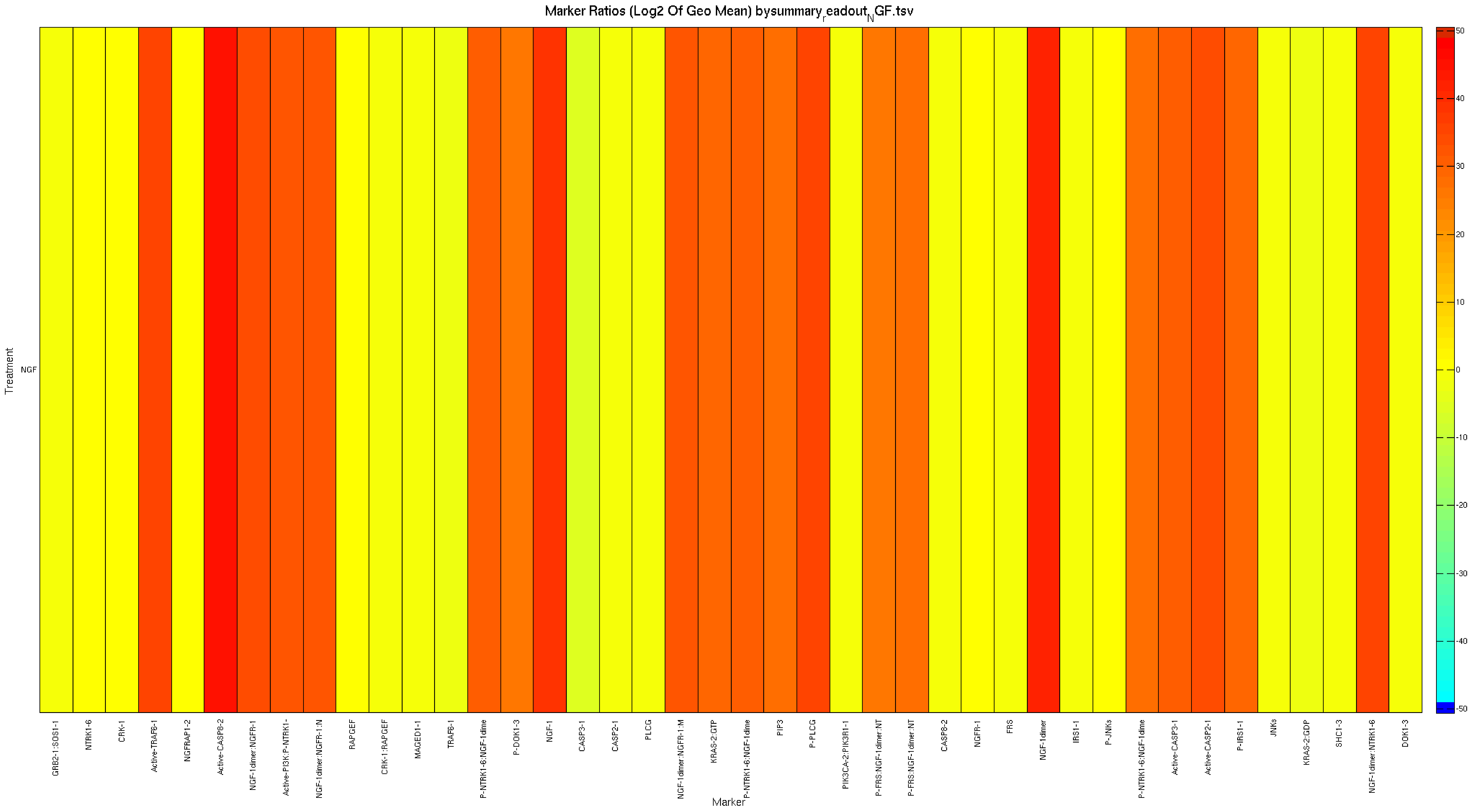


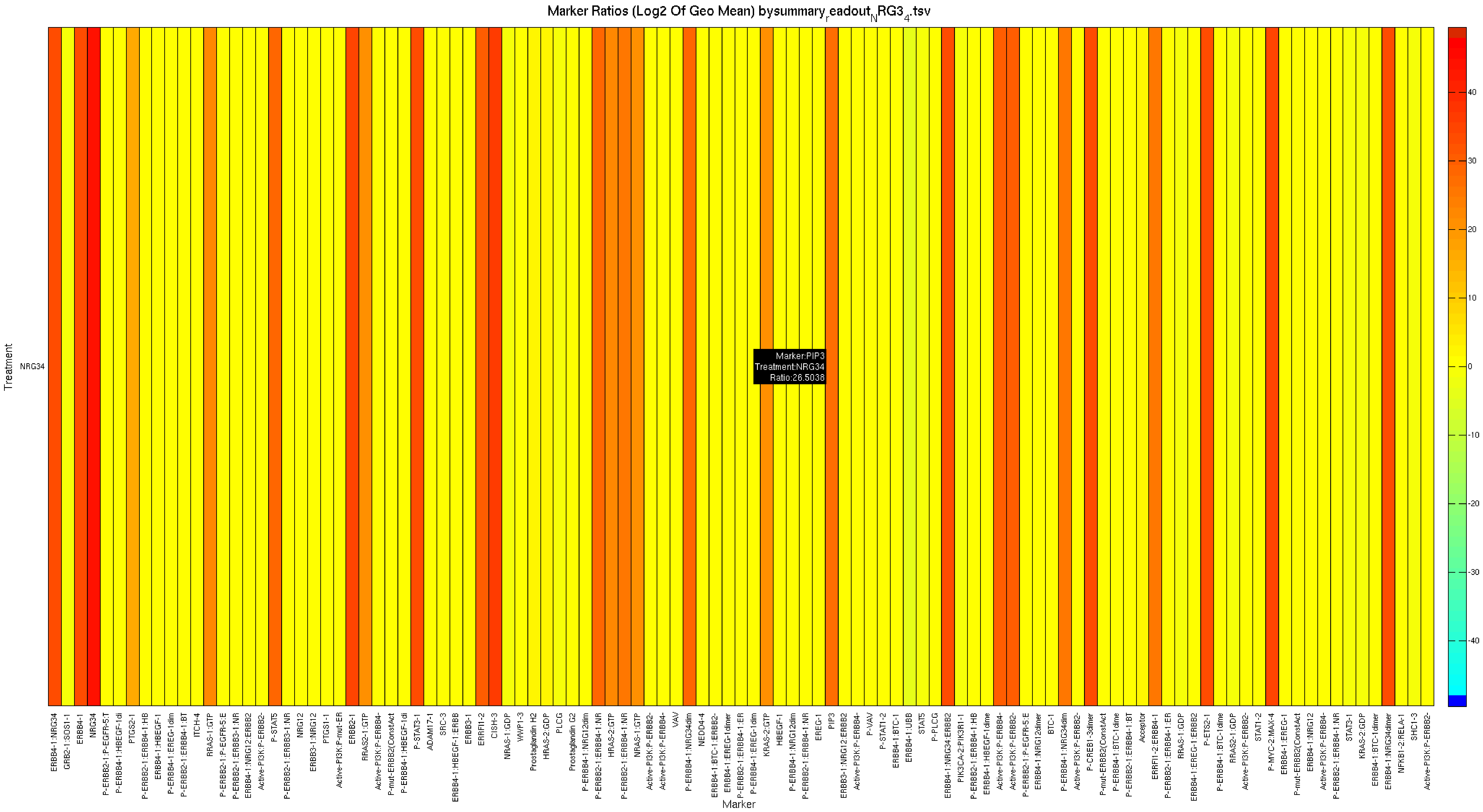
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_M$STN.tsv

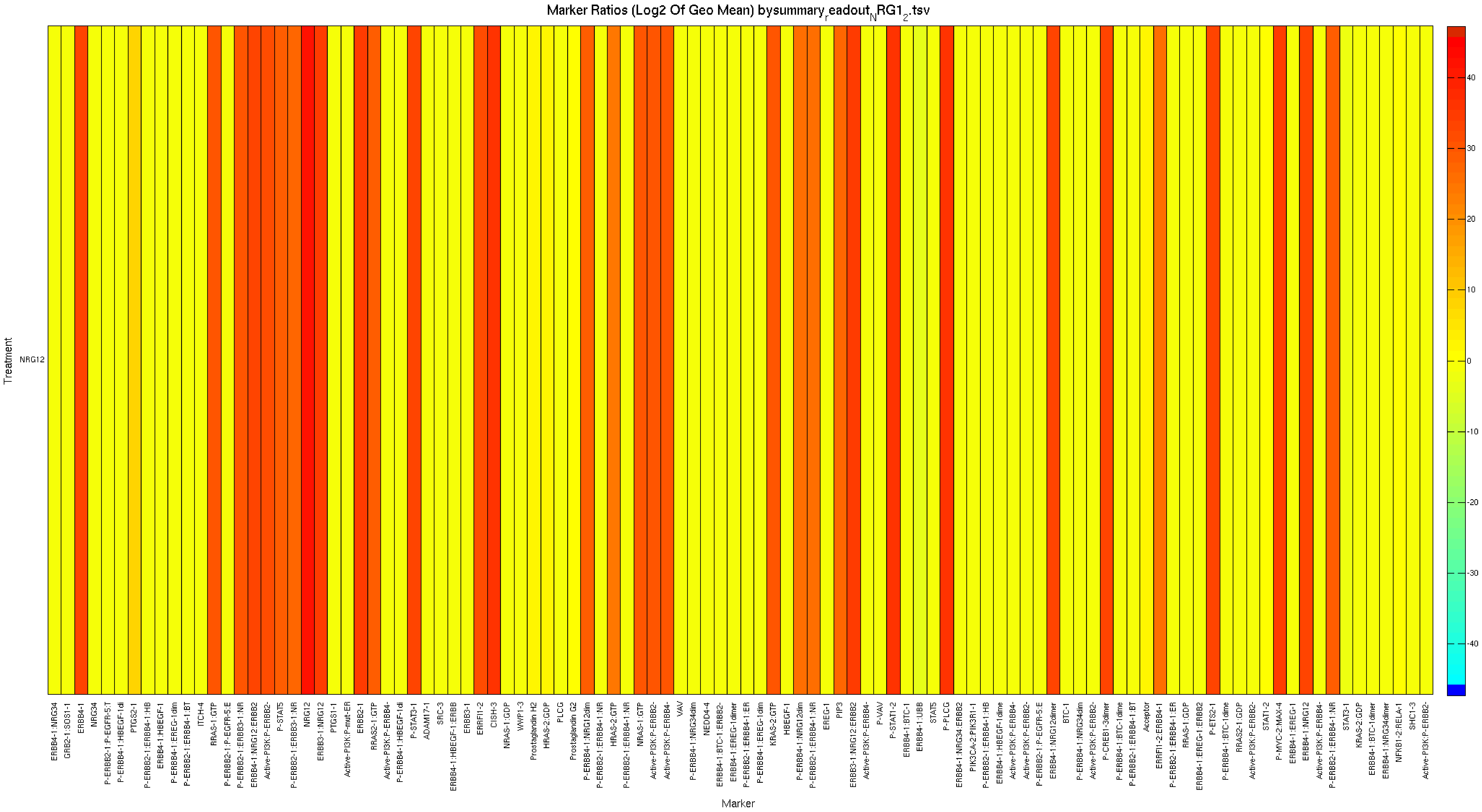
Marker Ratios (Log2 Of Geo Mean) bysummary_readout_NDP.tsv

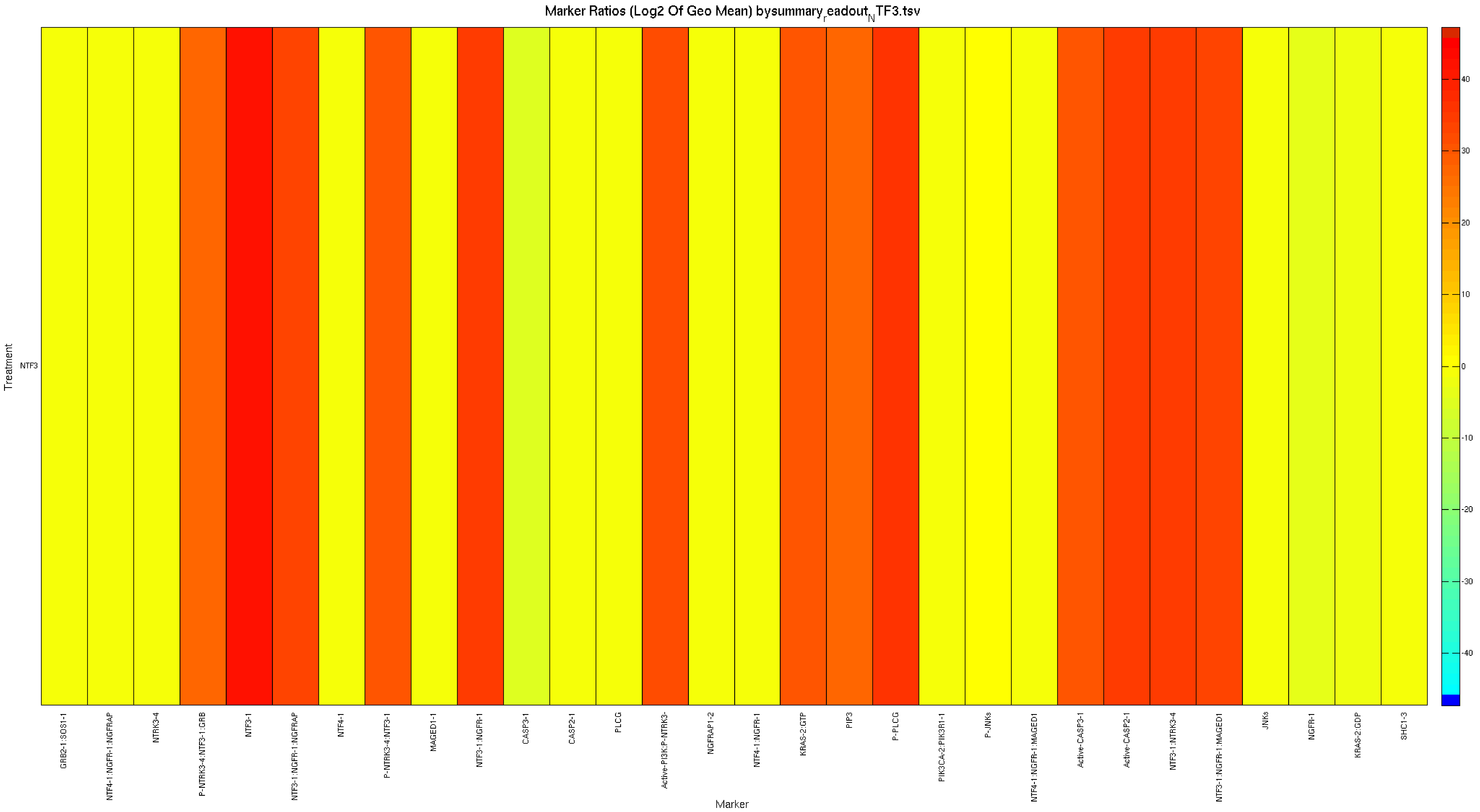


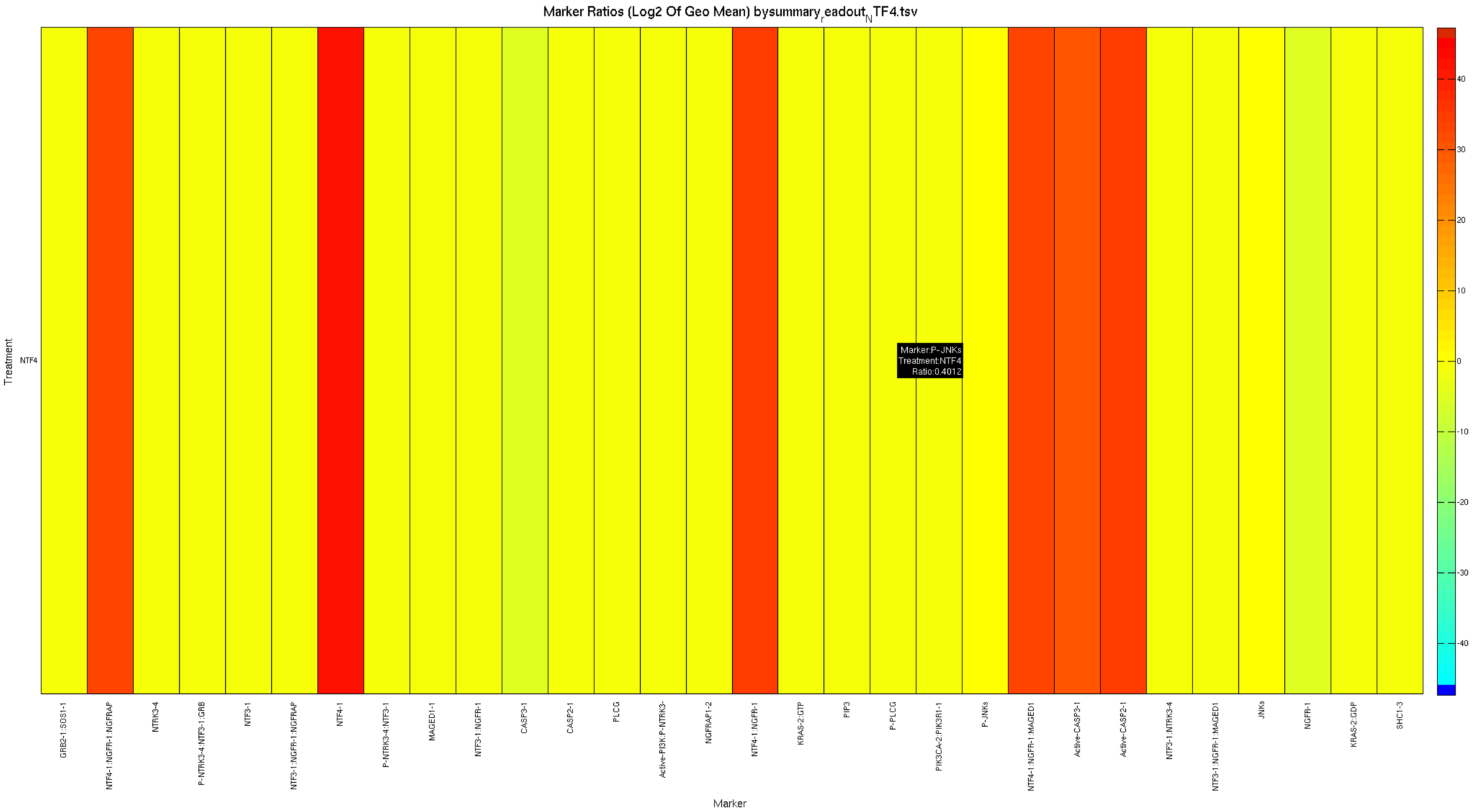

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_N$FkB.tsv

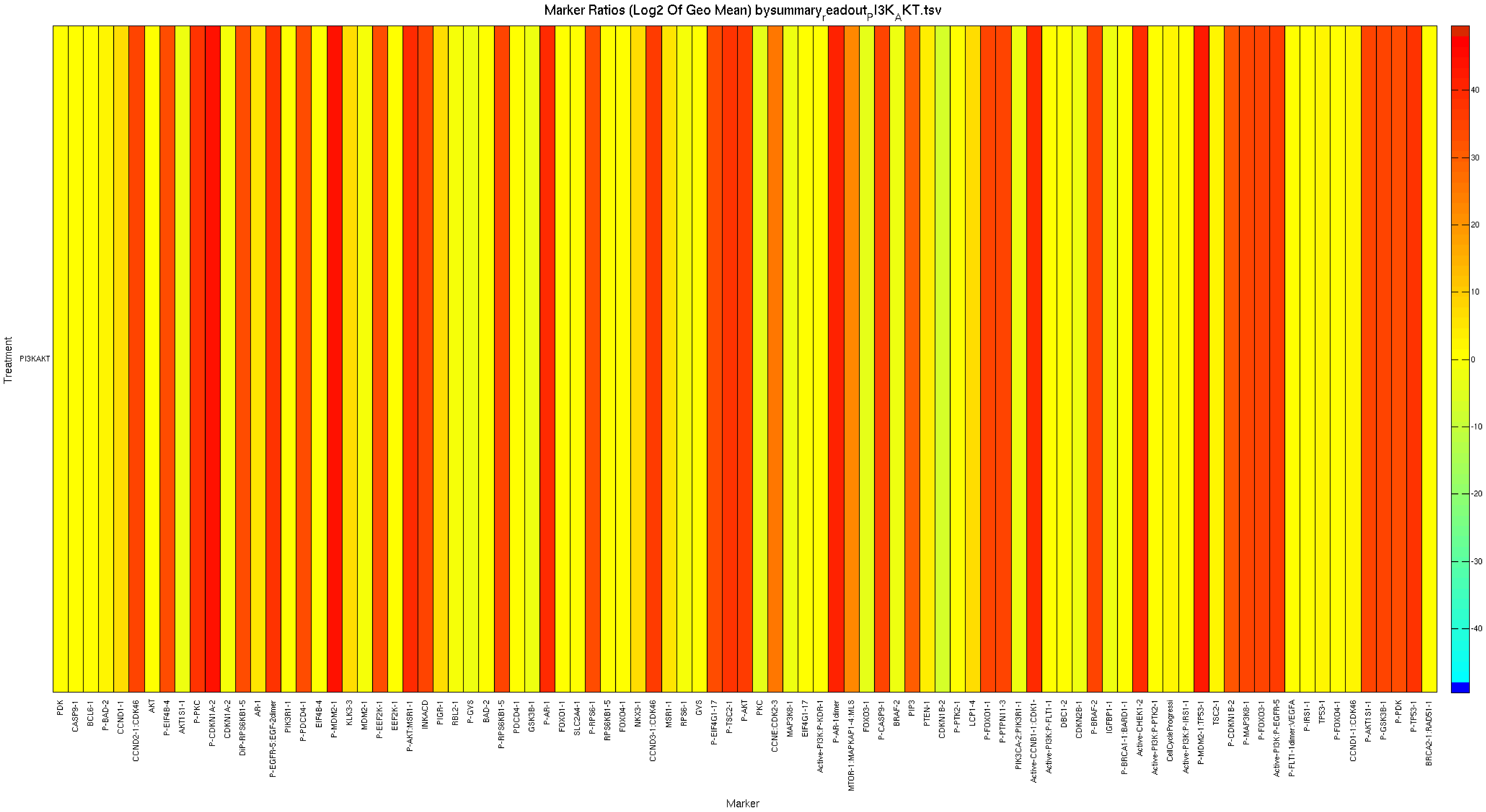

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_NGF.tsv
Treatment
NGF
Marker
GRB2-1:SOS1-1
NTRK1-6
CRK-1
Active-TRAF6-1
NGFRAP1-2
Active-CASP8-2
NGF-1dimer:NGFR-1
Active-PI3K:P-NTRK1-
NGF-1dimer:NGFR-1:N
RAPGEF
CRK-1:RAPGEF
MAGED1-1
TRAF6-1
P-NTRK1-6:NGF-1dime
P-DOK1-3
NGF-1
CASP3-1
CASP2-1
PLCG
NGF-1dimer:NGFR-1:M
KRAS-2:GTP
P-NTRK1-6:NGF-1dime
PIP3
P-PLCG
PIK3CA-2:PIK3R1-1
P-FRS:NGF-1dimer:NT
P-FRS:NGF-1dimer:NT
CASP8-2
NGFR-1
FRS
NGF-1dimer
IRS1-1
P-JNKs
P-NTRK1-6:NGF-1dime
Active-CASP3-1
Active-CASP2-1
P-IRS1-1
JNKs
KRAS-2:GDP
SHC1-3
NGF-1dimer:NTRK1-6
DOK1-3
50
40
30
20
10
0
-10
-20
-30
-40
-50

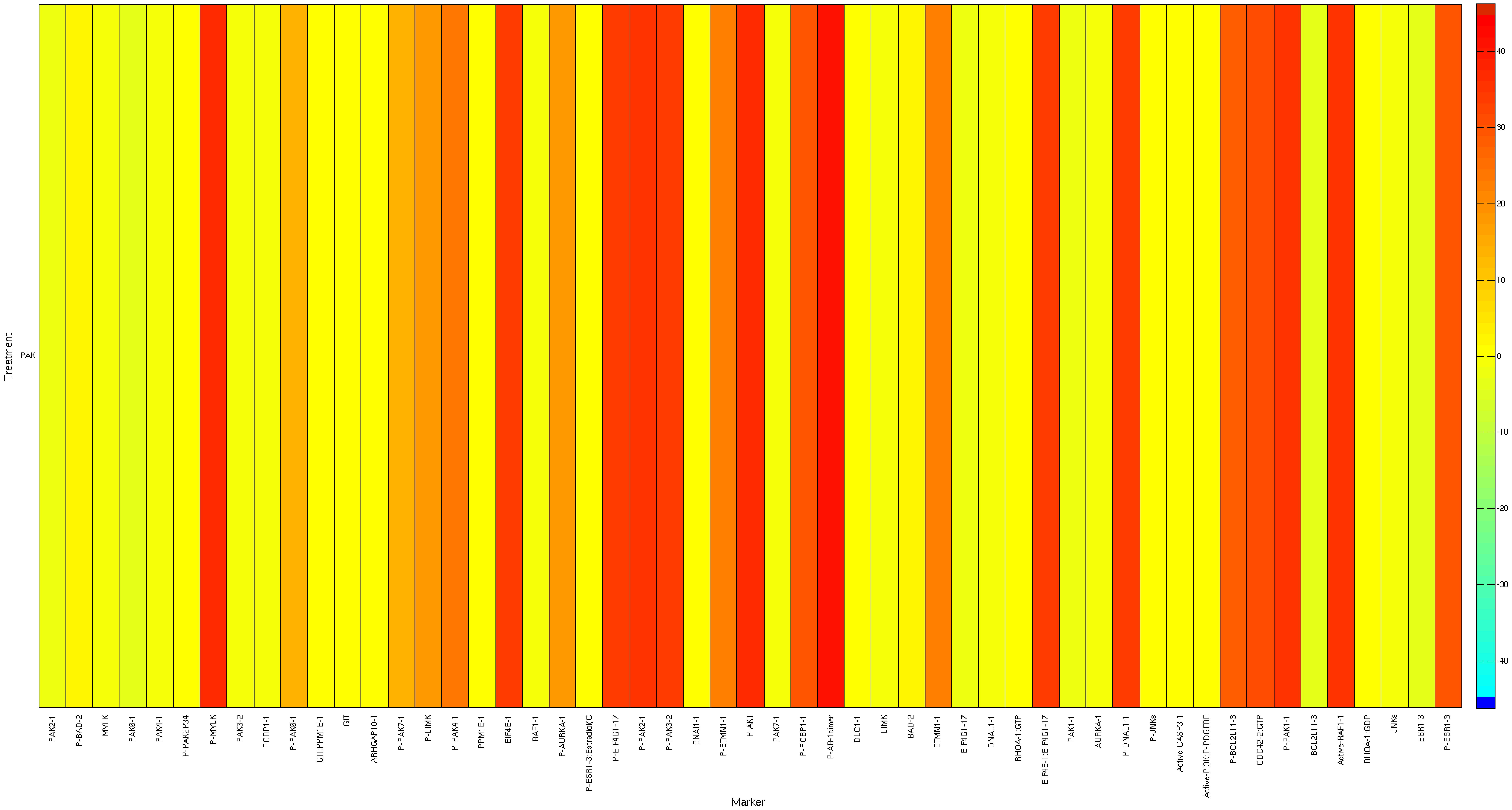

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_N$RG3$_4$.tsv
Treatment
NRG34
Marker:PIP3
Treatment:NRG34
Ratio:26.5038
Marker
ERBB4-1:NRG34
GRB2-1:SOS1-1
ERBB4-1
NRG34
P-ERBB2-1:P-EGFR-5:T
P-ERBB4-1:HBEGF-1di
PTGS2-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1
P-ERBB4-1:EREG-1dim
P-ERBB2-1:ERBB4-1:BT
ITCH-4
RRAS-1:GTP
P-ERBB2-1:P-EGFR-5:E
P-ERBB2-1:ERBB3-1:NR
ERBB4-1:NRG12:ERBB2
Active-PI3K:P-ERBB2-
P-STAT5
P-ERBB2-1:ERBB3-1:NR
NRG12
ERBB3-1:NRG12
PTGS1-1
Active-PI3K:P-mut-ER
ERBB2-1
RRAS2-1:GTP
Active-PI3K:P-ERBB4-
P-mut-ERBB2(ConstAct
P-ERBB4-1:HBEGF-1di
P-STAT3-1
ADAM17-1
SRC-3
ERBB4-1:HBEGF-1:ERBB
ERBB3-1
ERRFI1-2
CISH-3
NRAS-1:GDP
WWP1-3
Prostaglandin H2
HRAS-2:GDP
PLCG
Prostaglandin G2
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
HRAS-2:GTP
P-ERBB2-1:ERBB4-1:NR
NRAS-1:GTP
Active-PI3K:P-ERBB2-
Active-PI3K:P-ERBB4-
VAV
P-ERBB4-1:NRG34dim
NEDD4-4
ERBB4-1:BTC-1:ERBB2-
ERBB4-1:EREG-1dimer
P-ERBB2-1:ERBB4-1:ER
P-ERBB4-1:EREG-1dim
KRAS-2:GTP
HBEGF-1
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
EREG-1
PIP3
ERBB3-1:NRG12:ERBB2
Active-PI3K:P-ERBB4-
P-VAV
P-STAT1-2
ERBB4-1:BTC-1
ERBB4-1:UBB
STAT5
P-PLCG
ERBB4-1:NRG34:ERBB2
PIK3CA-2:PIK3R1-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1dime
Active-PI3K:P-ERBB4-
Active-PI3K:P-ERBB2-
P-ERBB2-1:P-EGFR-5:E
ERBB4-1:NRG12dimer
BTC-1
P-ERBB4-1:NRG34dim
Active-PI3K:P-ERBB2-
P-CREB1-3dimer
P-mut-ERBB2(ConstAct
P-ERBB4-1:BTC-1dime
P-ERBB2-1:ERBB4-1:BT
Acceptor
ERRFI1-2:ERBB4-1
P-ERBB2-1:ERBB4-1:ER
RRAS-1:GDP
ERBB4-1:EREG-1:ERBB2
P-ETS2-1
P-ERBB4-1:BTC-1dime
RRAS2-1:GDP
Active-PI3K:P-ERBB2-
STAT1-2
P-MYC-2:MAX-4
ERBB4-1:EREG-1
P-mut-ERBB2(ConstAct
ERBB4-1:NRG12
Active-PI3K:P-ERBB4-
P-ERBB2-1:ERBB4-1:NR
STAT3-1
KRAS-2:GDP
ERBB4-1:BTC-1dimer
ERBB4-1:NRG34dimer
NFKB1-2:RELA-1
SHC1-3
Active-PI3K:P-ERBB2-
40
30
20
10
0
-10
-20
-30
-40

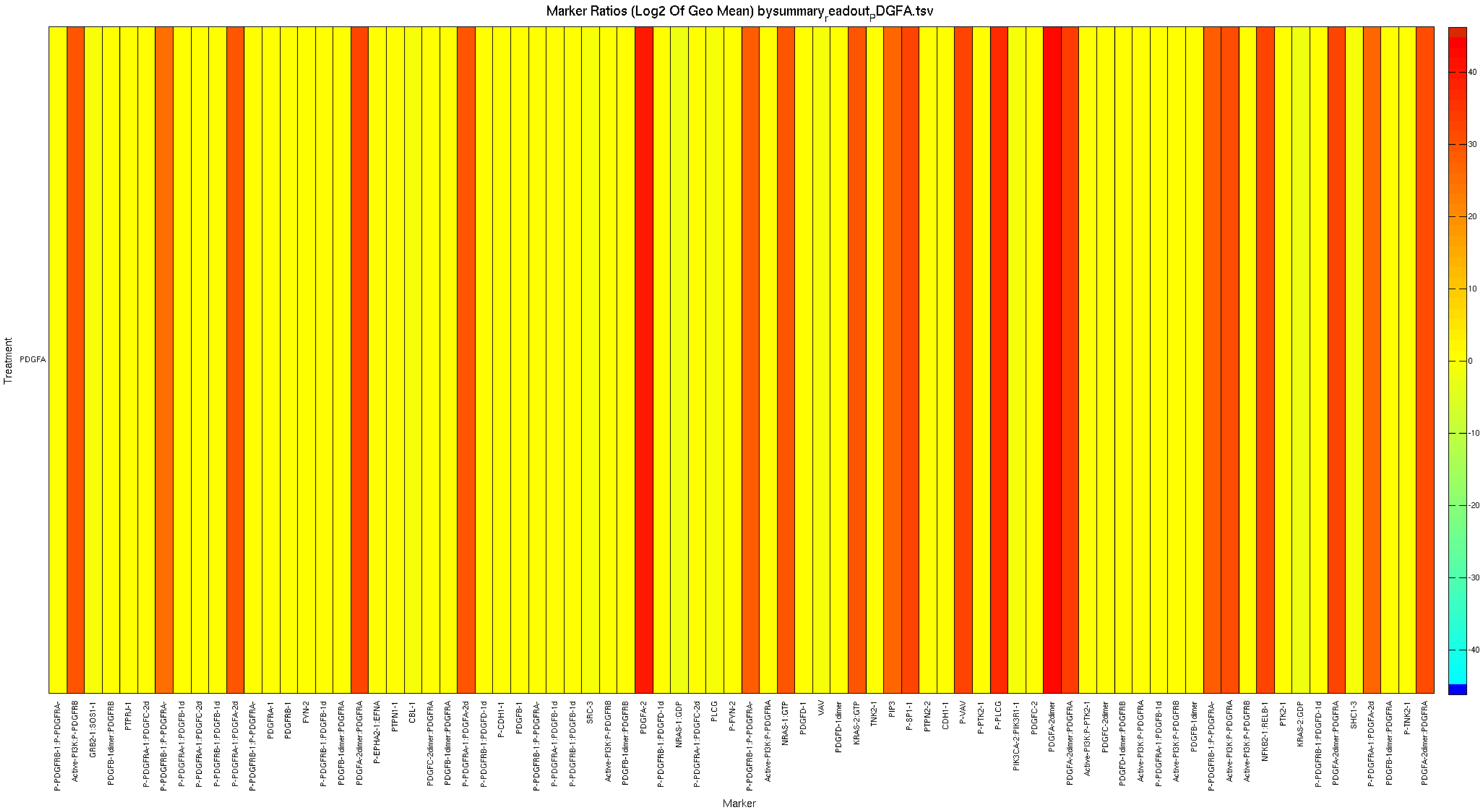

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_NRG1_2.tsv
Treatment
NRG12
Marker
40
30
20
10
0
-10
-20
-30
-40
ERBB4-1:NRG34
GRB2-1:SOS1-1
ERBB4-1
NRG34
P-ERBB2-1:P-EGFR-5:T
P-ERBB4-1:HBEGF-1di
PTGS2-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1
P-ERBB4-1:EREG-1dim
P-ERBB2-1:ERBB4-1:BT
ITCH-4
RRAS-1:GTP
P-ERBB2-1:P-EGFR-5:E
P-ERBB2-1:ERBB3-1:NR
ERBB4-1:NRG12:ERBB2
Active-PI3K:P-ERBB2-
P-STAT5
P-ERBB2-1:ERBB3-1:NR
NRG12
ERBB3-1:NRG12
PTGS1-1
Active-PI3K:P-mut-ER
ERBB2-1
RRAS2-1:GTP
Active-PI3K:P-ERBB4-
P-ERBB4-1:HBEGF-1di
P-STAT3-1
ADAM17-1
SRC-3
ERBB4-1:HBEGF-1:ERBB
ERBB3-1
ERRFI1-2
CISH-3
NRAS-1:GDP
WWP1-3
Prostaglandin H2
HRAS-2:GDP
PLCG
Prostaglandin G2
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
HRAS-2:GTP
P-ERBB2-1:ERBB4-1:NR
NRAS-1:GTP
Active-PI3K:P-ERBB2-
Active-PI3K:P-ERBB4-
VAV
P-ERBB4-1:NRG34dim
NEDD4-4
ERBB4-1:BTC-1:ERBB2-
ERBB4-1:EREG-1dimer
P-ERBB2-1:ERBB4-1:ER
P-ERBB4-1:EREG-1dim
KRAS-2:GTP
HBEGF-1
P-ERBB4-1:NRG12dim
P-ERBB2-1:ERBB4-1:NR
EREG-1
PIP3
ERBB3-1:NRG12:ERBB2
Active-PI3K:P-ERBB4-
P-VAV
P-STAT1-2
ERBB4-1:BTC-1
ERBB4-1:UBB
STAT5
P-PLCG
ERBB4-1:NRG34:ERBB2
PIK3CA-2:PIK3R1-1
P-ERBB2-1:ERBB4-1:HB
ERBB4-1:HBEGF-1dime
Active-PI3K:P-ERBB4-
Active-PI3K:P-ERBB2-
P-ERBB2-1:P-EGFR-5:E
ERBB4-1:NRG12dimer
BTC-1
P-ERBB4-1:NRG34dim
Active-PI3K:P-ERBB2-
P-CREB1-3dimer
P-ERBB4-1:BTC-1dime
P-ERBB2-1:ERBB4-1:BT
Acceptor
ERRFI1-2:ERBB4-1
P-ERBB2-1:ERBB4-1:ER
RRAS-1:GDP
ERBB4-1:EREG-1:ERBB2
P-ETS2-1
P-ERBB4-1:BTC-1dime
RRAS2-1:GDP
Active-PI3K:P-ERBB2-
STAT1-2
P-MYC-2:MAX-4
ERBB4-1:EREG-1
ERBB4-1:NRG12
Active-PI3K:P-ERBB4-
P-ERBB2-1:ERBB4-1:NR
STAT3-1
KRAS-2:GDP
ERBB4-1:BTC-1dimer
ERBB4-1:NRG34dimer
NFKB1-2:RELA-1
SHC1-3
Active-PI3K:P-ERBB2-

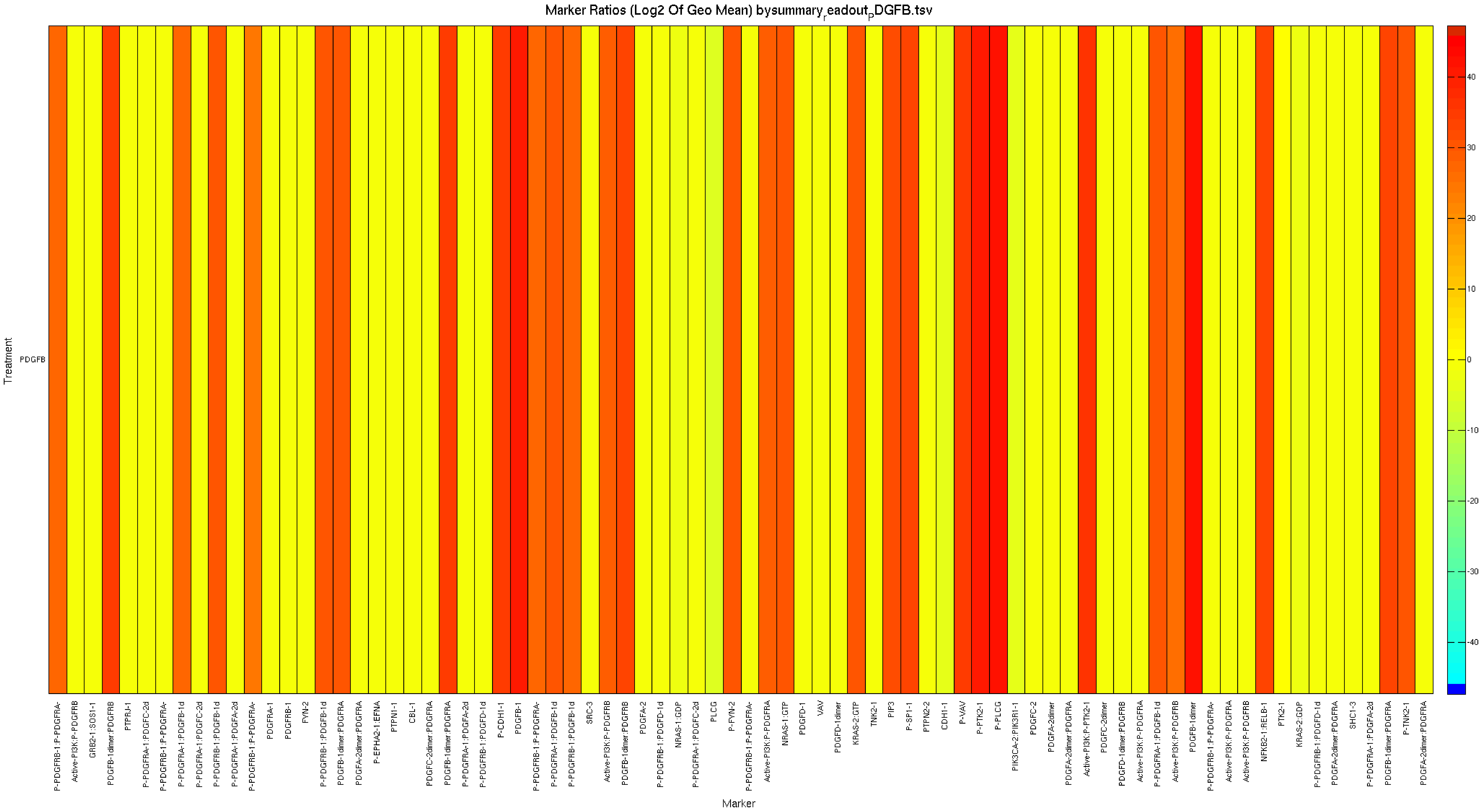

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_NTF3.tsv
Treatment
NTF3
Marker
GRB2-1:SOS1-1
NTF4-1:NGFR-1:NGFRAP
NTRK3-4
P-NTRK3-4:NTF3-1:GRB
NTF3-1
NTF3-1:NGFR-1:NGFRAP
NTF4-1
P-NTRK3-4:NTF3-1
MAGED1-1
NTF3-1:NGFR-1
CASP3-1
CASP2-1
PLCG
Active-PI3K:P-NTRK3-
NGFRAP1-2
NTF4-1:NGFR-1
KRAS-2:GTP
PIP3
P-PLCG
PIK3CA-2:PIK3R1-1
P-JNKs
NTF4-1:NGFR-1:MAGED1
Active-CASP3-1
Active-CASP2-1
NTF3-1:NTRK3-4
NTF3-1:NGFR-1:MAGED1
JNKs
NGFR-1
KRAS-2:GDP
SHC1-3
40
30
20
10
0
-10
-20
-30
-40

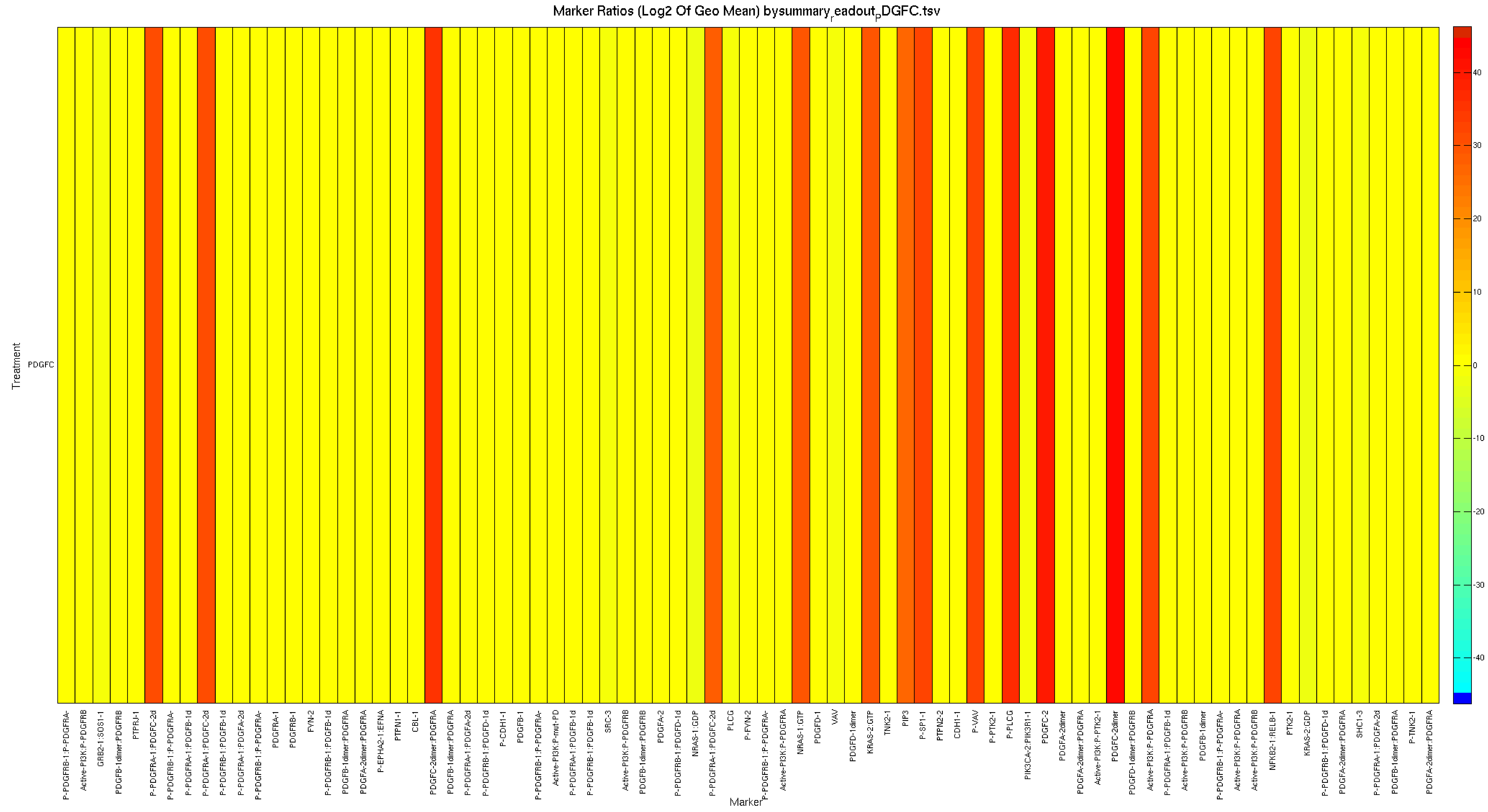

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_NTF4.tsv
Treatment
NTF4
Marker:P-JNKs
Treatment:NTF4
Ratio:0.4012
40
30
20
10
0
-10
-20
-30
-40
GRB2-1:SOS1-1
NTF4-1:NGFR-1:NGFRAP
NTRK3-4
P-NTRK3-4:NTF3-1:GRB
NTF3-1
NTF3-1:NGFR-1:NGFRAP
NTF4-1
P-NTRK3-4:NTF3-1
MAGED1-1
NTF3-1:NGFR-1
CASP3-1
CASP2-1
PLCG
Active-PI3K:P-NTRK3-
NGFRAP1-2
NTF4-1:NGFR-1
KRAS-2:GTP
PIP3
P-PLCG
PIK3CA-2:PIK3R1-1
P-JNKs
NTF4-1:NGFR-1:MAGED1
Active-CASP3-1
Active-CASP2-1
NTF3-1:NTRK3-4
NTF3-1:NGFR-1:MAGED1
JNKs
NGFR-1
KRAS-2:GDP
SHC1-3
Marker

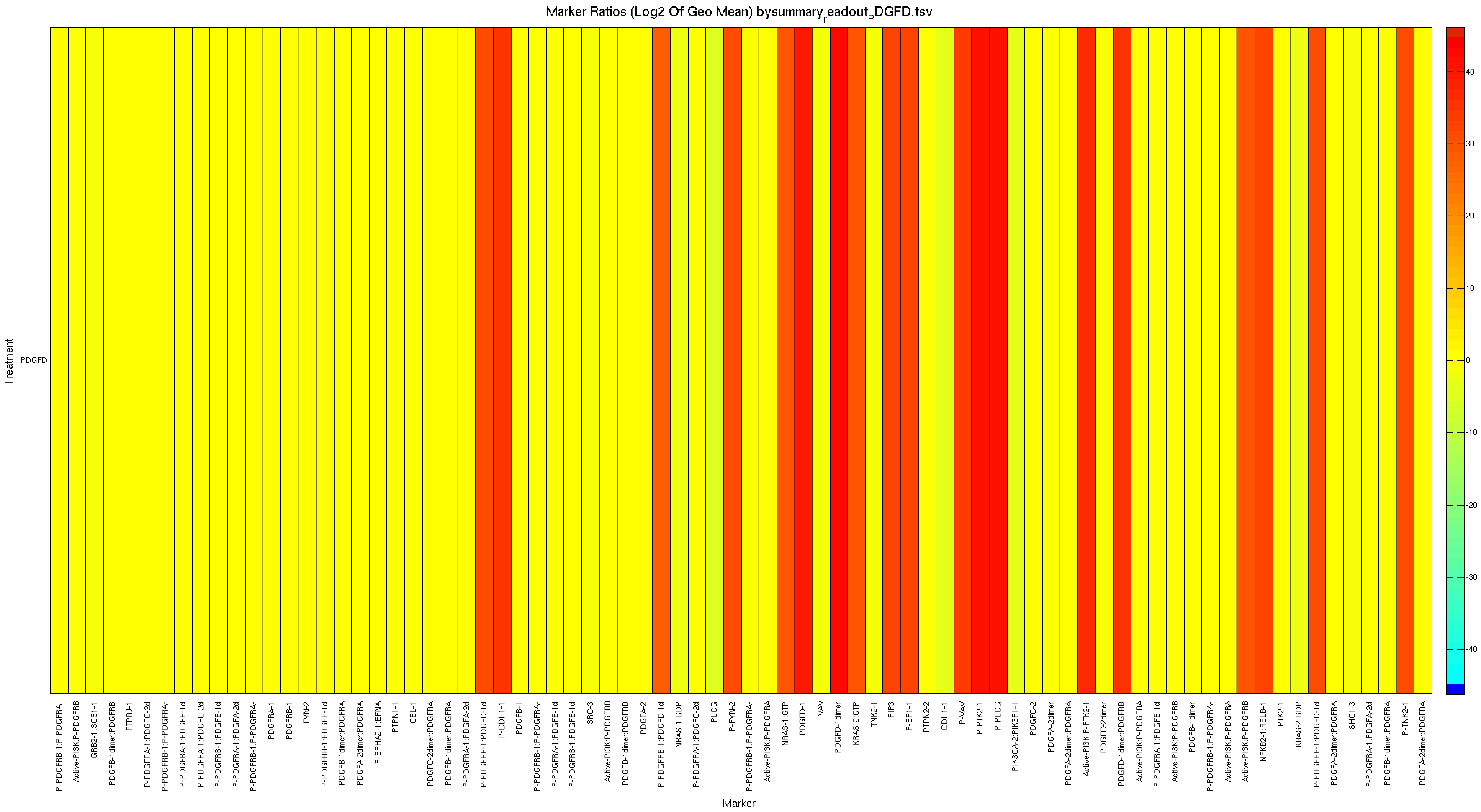

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_P$I3K$_A$KT.tsv
Treatment
PI3KAKT
Marker
PDK
CASP9-1
BCL6-1
P-BAD-2
CCND1-1
CCND2-1:CDK46
AKT
P-EIF4B-4
AKT1S1-1
P-PKC
P-CDKN1A-2
CDKN1A-2
DiP-RPS6KB1-5
AR-1
P-EGFR-5:EGF-2dimer
PIK3R1-1
P-PDCD4-1
EIF4B-4
P-MDM2-1
KLK3-3
MDM2-1
P-EEF2K-1
EEF2K-1
P-AKT:MSR1-1
INKACD
PIGR-1
RBL2-1
P-GYS
BAD-2
P-RPS6KB1-5
PDCD4-1
GSK3B-1
P-AR-1
FOXO1-1
SLC2A4-1
P-RPS6-1
RPS6KB1-5
FOXO4-1
NKX3-1
CCND3-1:CDK46
MSR1-1
RPS6-1
GYS
P-EIF4G1-17
P-TSC2-1
P-AKT
PKC
CCNE:CDK2-3
MAP3K8-1
EIF4G1-17
Active-PI3K:P-KDR-1
P-AR-1dimer
MTOR-1:MAPKAP1-4:MLS
FOXO3-1
P-CASP9-1
BRAF-2
PIP3
PTEN-1
CDKN1B-2
P-PTK2-1
LCP1-4
P-FOXO1-1
P-PTPN11-3
PIK3CA-2:PIK3R1-1
Active-CCNB1-1:CDK1-
Active-PI3K:P-FLT1-1
DBC1-2
CDKN2B-1
P-BRAF-2
IGFBP1-1
P-BRCA1-1:BARD1-1
Active-CHEK1-2
Active-PI3K:P-PTK2-1
CellCycleProgressi
Active-PI3K:P-IRS1-1
P-MDM2-1:TP53-1
TSC2-1
P-CDKN1B-2
P-MAP3K8-1
P-FOXO3-1
Active-PI3K:P-EGFR-5
P-FLT1-1dimer:VEGFA
P-IRS1-1
TP53-1
P-FOXO4-1
CCND1-1:CDK46
P-AKT1S1-1
P-GSK3B-1
P-PDK
P-TP53-1
BRCA2-1:RAD51-1
40
30
20
10
0
-10
-20
-30
-40

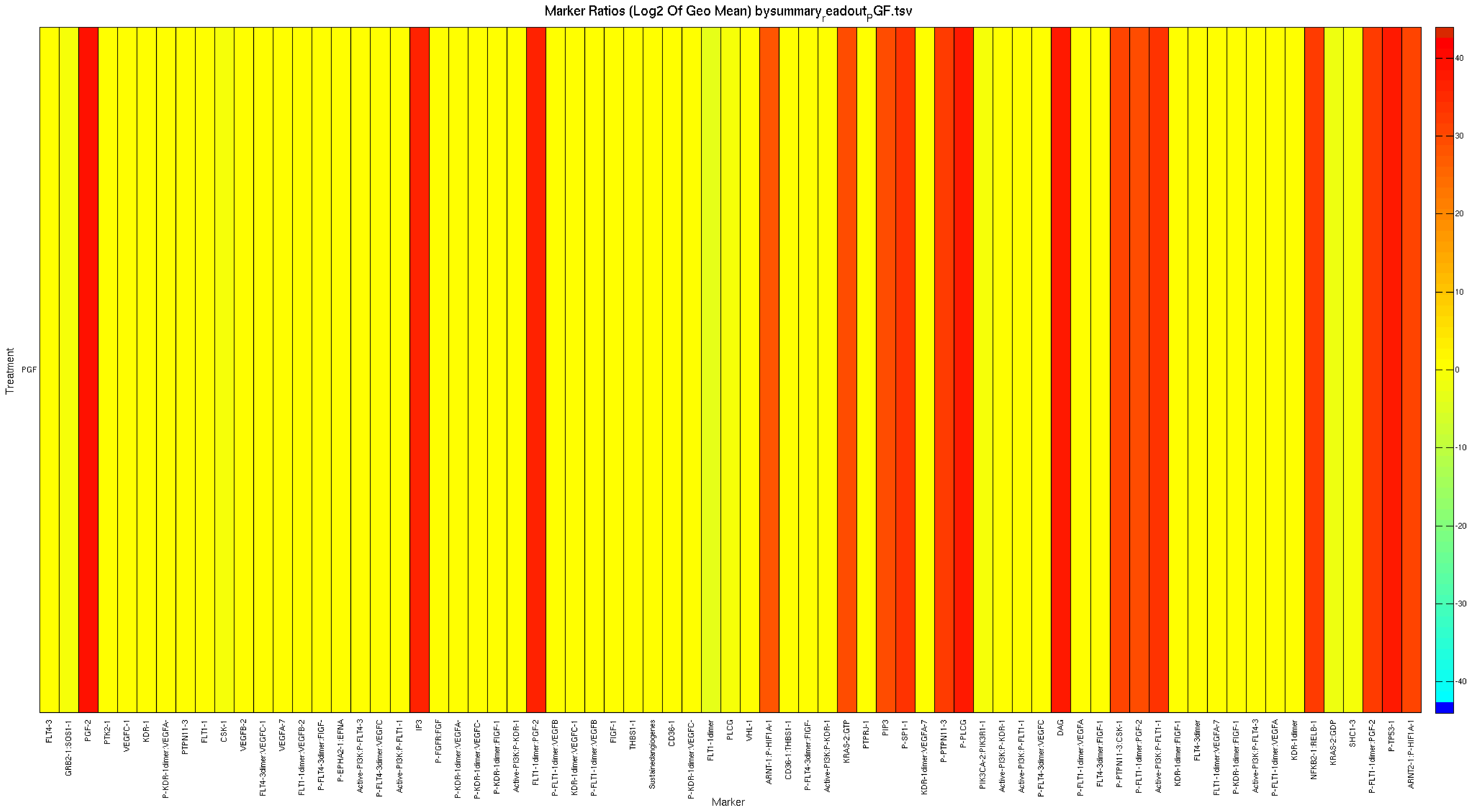

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_P$AK.tsv

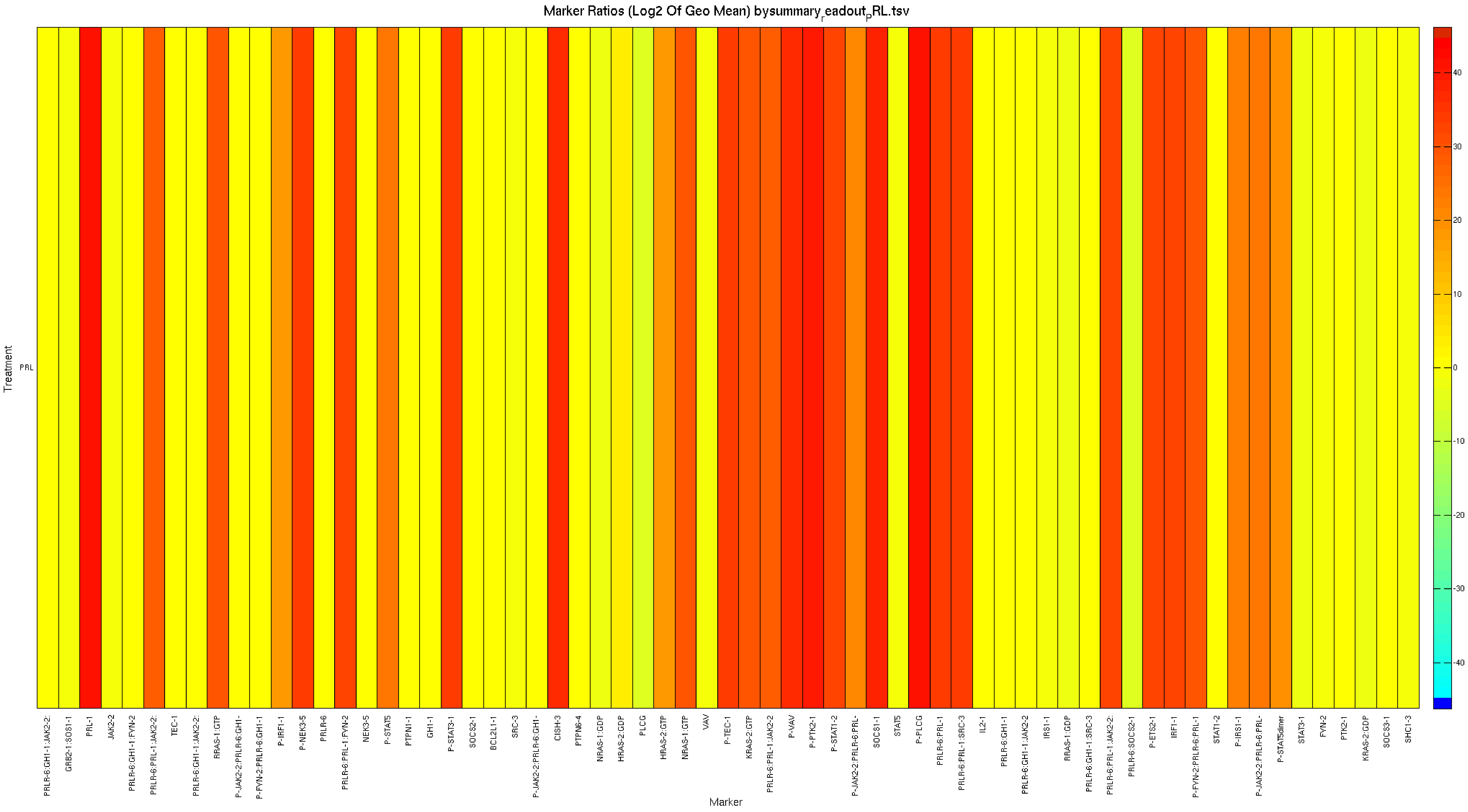

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_PDGFA.tsv
Treatment
PDGFA
Marker
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRB
GRB2-1:SOS1-1
PDGFB-1dimer:PDGFRB
PTPRJ-1
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:P-PDGFRA-
P-PDGFRA-1:PDGFB-1d
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:PDGFB-1d
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:P-PDGFRA-
PDGFRA-1
PDGFRB-1
FYN-2
P-PDGFRB-1:PDGFB-1d
PDGFB-1dimer:PDGFRA
PDGFA-2dimer:PDGFRA
P-EPHA2-1:EFNA
PTPN1-1
CBL-1
PDGFC-2dimer:PDGFRA
PDGFB-1dimer:PDGFRA
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:PDGFD-1d
P-CDH1-1
PDGFB-1
P-PDGFRB-1:P-PDGFRA-
P-PDGFRA-1:PDGFB-1d
P-PDGFRB-1:PDGFB-1d
SRC-3
Active-PI3K:P-PDGFRB
PDGFB-1dimer:PDGFRB
PDGFA-2
P-PDGFRB-1:PDGFD-1d
NRAS-1:GDP
P-PDGFRA-1:PDGFC-2d
PLCG
P-FYN-2
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
NRAS-1:GTP
PDGFD-1
VAV
PDGFD-1dimer
KRAS-2:GTP
TNK2-1
PIP3
P-SP1-1
PTPN2-2
CDH1-1
P-VAV
P-PTK2-1
P-PLCG
PIK3CA-2:PIK3R1-1
PDGFC-2
PDGFA-2dimer
PDGFA-2dimer:PDGFRA
Active-PI3K:P-PTK2-1
PDGFC-2dimer
PDGFD-1dimer:PDGFRB
Active-PI3K:P-PDGFRA
P-PDGFRA-1:PDGFB-1d
Active-PI3K:P-PDGFRB
PDGFB-1dimer
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
Active-PI3K:P-PDGFRB
NFKB2-1:RELB-1
PTK2-1
KRAS-2:GDP
P-PDGFRB-1:PDGFD-1d
PDGFA-2dimer:PDGFRA
SHC1-3
P-PDGFRA-1:PDGFA-2d
PDGFB-1dimer:PDGFRA
P-TNK2-1
PDGFA-2dimer:PDGFRA
40
30
20
10
0
-10
-20
-30
-40

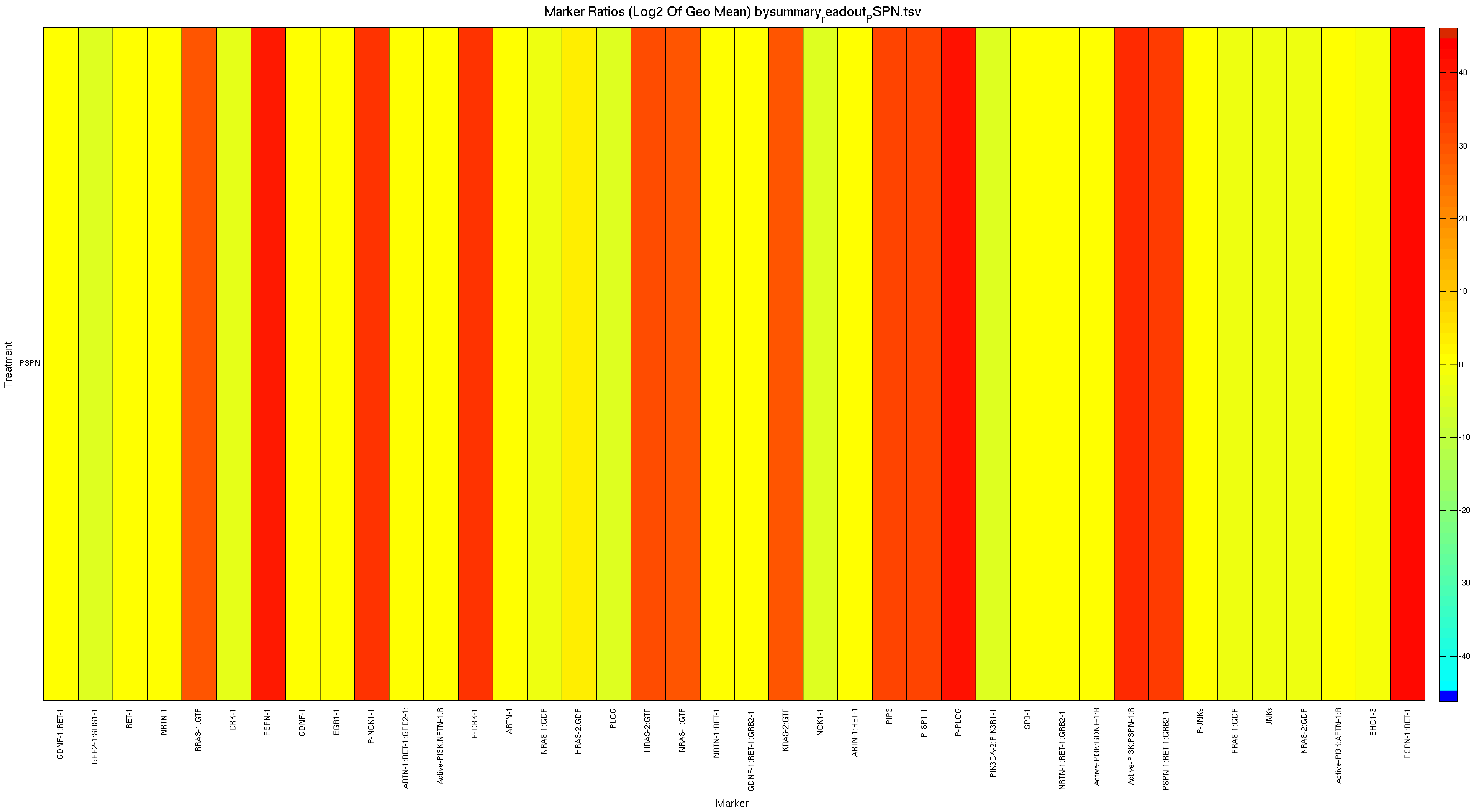

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_P$DGFB.tsv
Treatment
PDGFB
Marker
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRB
GRB2-1:SOS1-1
PDGFB-1dimer:PDGFRB
PTPRJ-1
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:P-PDGFRA-
P-PDGFRA-1:PDGFB-1d
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:PDGFB-1d
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:P-PDGFRA-
PDGFRA-1
PDGFRB-1
FYN-2
P-PDGFRB-1:PDGFB-1d
PDGFB-1dimer:PDGFRA
PDGFA-2dimer:PDGFRA
P-EPHA2-1:EFNA
PTPN1-1
CBL-1
PDGFC-2dimer:PDGFRA
PDGFB-1dimer:PDGFRA
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:PDGFD-1d
P-CDH1-1
PDGFB-1
P-PDGFRB-1:P-PDGFRA-
P-PDGFRA-1:PDGFB-1d
P-PDGFRB-1:PDGFB-1d
SRC-3
Active-PI3K:P-PDGFRB
PDGFB-1dimer:PDGFRB
PDGFA-2
P-PDGFRB-1:PDGFD-1d
NRAS-1:GDP
P-PDGFRA-1:PDGFC-2d
PLCG
P-FYN-2
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
NRAS-1:GTP
PDGFD-1
VAV
PDGFD-1dimer
KRAS-2:GTP
TNK2-1
PIP3
P-SP1-1
PTPN2-2
CDH1-1
P-VAV
P-PTK2-1
P-PLCG
PIK3CA-2:PIK3R1-1
PDGFC-2
PDGFA-2dimer
PDGFA-2dimer:PDGFRA
Active-PI3K:P-PTK2-1
PDGFC-2dimer
PDGFD-1dimer:PDGFRB
Active-PI3K:P-PDGFRA
P-PDGFRA-1:PDGFB-1d
Active-PI3K:P-PDGFRB
PDGFB-1dimer
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
Active-PI3K:P-PDGFRB
NFKB2-1:RELB-1
PTK2-1
KRAS-2:GDP
P-PDGFRB-1:PDGFD-1d
PDGFA-2dimer:PDGFRA
SHC1-3
P-PDGFRA-1:PDGFA-2d
PDGFB-1dimer:PDGFRA
P-TNK2-1
PDGFA-2dimer:PDGFRA
40
30
20
10
0
-10
-20
-30
-40

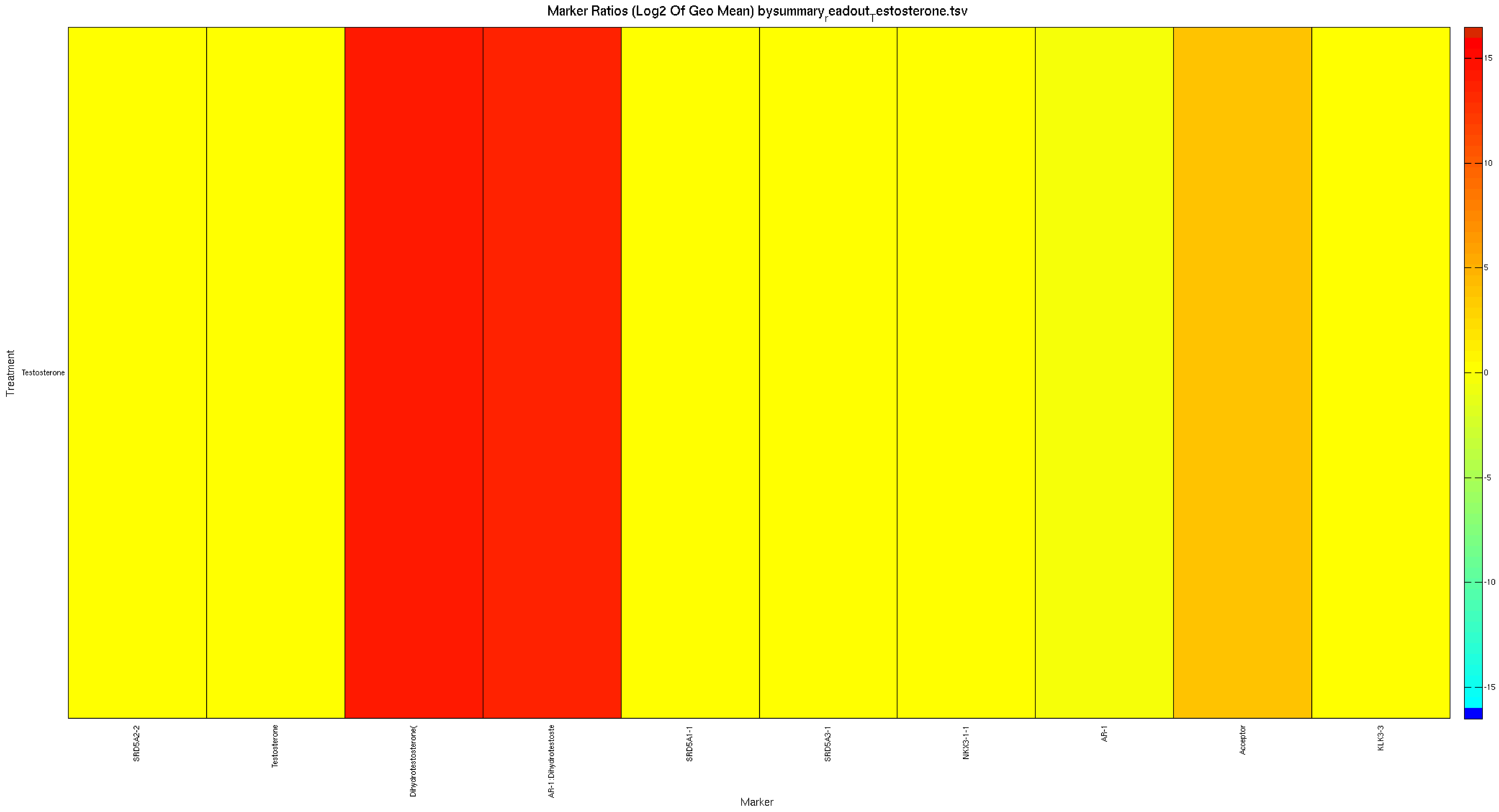

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_P$DGFC.tsv
Treatment
PDGFC
Marker
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRB
GRB2-1:SOS1-1
PDGFB-1dimer:PDGFRB
PTPRJ-1
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:P-PDGFRA-
P-PDGFRA-1:PDGFB-1d
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:PDGFB-1d
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:P-PDGFRA-
PDGFRA-1
PDGFRB-1
FYN-2
P-PDGFRB-1:PDGFB-1d
PDGFB-1dimer:PDGFRA
PDGFA-2dimer:PDGFRA
P-EPHA2-1:EFNA
PTPN1-1
CBL-1
PDGFC-2dimer:PDGFRA
PDGFB-1dimer:PDGFRA
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:PDGFD-1d
P-CDH1-1
PDGFB-1
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-mut-PD
P-PDGFRA-1:PDGFB-1d
P-PDGFRB-1:PDGFB-1d
SRC-3
Active-PI3K:P-PDGFRB
PDGFB-1dimer:PDGFRB
PDGFA-2
P-PDGFRB-1:PDGFD-1d
NRAS-1:GDP
P-PDGFRA-1:PDGFC-2d
PLCG
P-FYN-2
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
NRAS-1:GTP
PDGFD-1
VAV
PDGFD-1dimer
KRAS-2:GTP
TNK2-1
PIP3
P-SP1-1
PTPN2-2
CDH1-1
P-VAV
P-PTK2-1
P-PLCG
PIK3CA-2:PIK3R1-1
PDGFC-2
PDGFA-2dimer
PDGFA-2dimer:PDGFRA
Active-PI3K:P-PTK2-1
PDGFC-2dimer
PDGFD-1dimer:PDGFRB
Active-PI3K:P-PDGFRA
P-PDGFRA-1:PDGFB-1d
Active-PI3K:P-PDGFRB
PDGFB-1dimer
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
Active-PI3K:P-PDGFRB
NFKB2-1:RELB-1
PTK2-1
KRAS-2:GDP
P-PDGFRB-1:PDGFD-1d
PDGFA-2dimer:PDGFRA
SHC1-3
P-PDGFRA-1:PDGFA-2d
PDGFB-1dimer:PDGFRA
P-TNK2-1
PDGFA-2dimer:PDGFRA
40
30
20
10
0
-10
-20
-30
-40

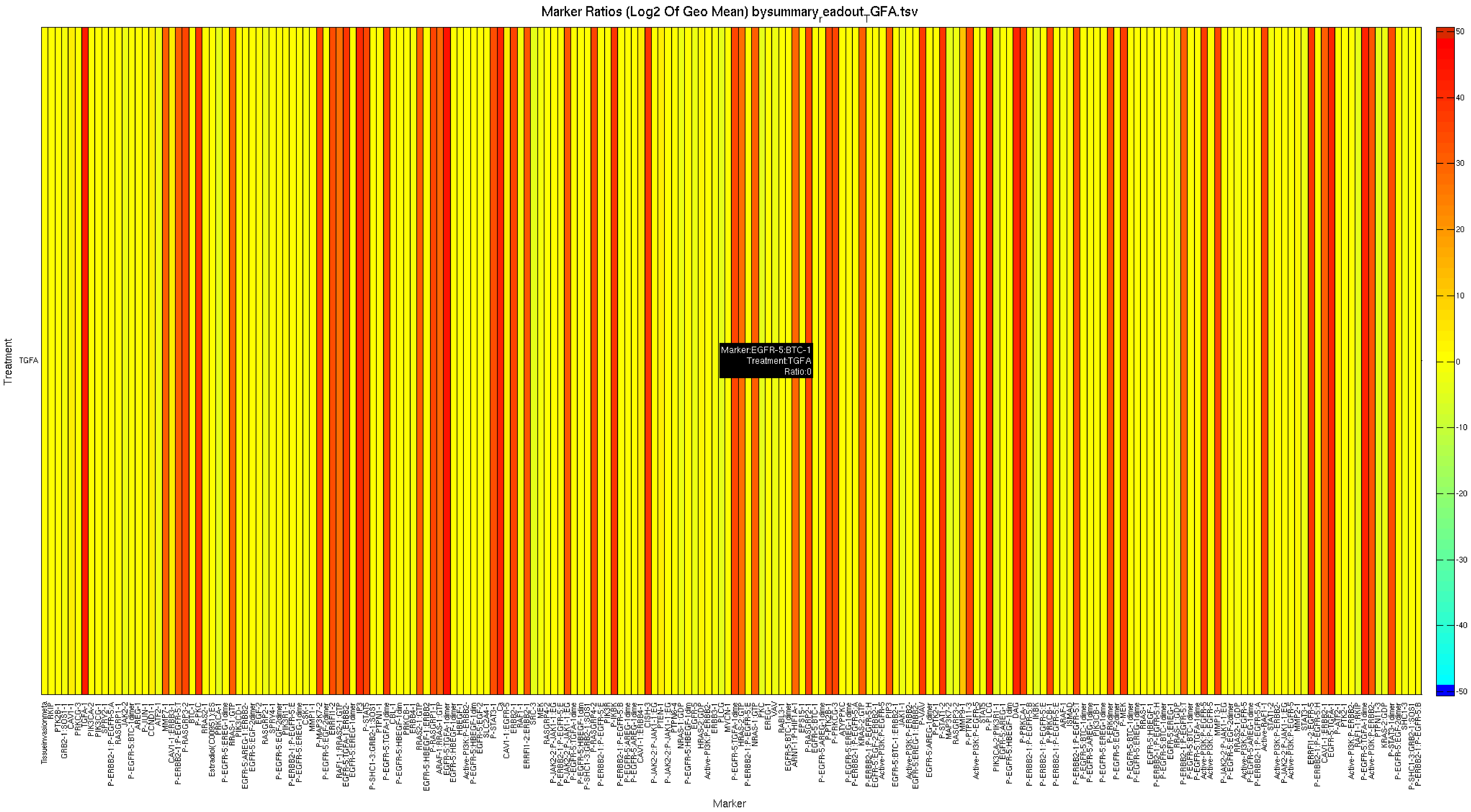

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_PDGFD.tsv
Treatment
PDGFD
Marker
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRB
GRB2-1:SOS1-1
PDGFB-1dimer:PDGFRB
PTPRJ-1
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:P-PDGFRA-
P-PDGFRA-1:PDGFB-1d
P-PDGFRA-1:PDGFC-2d
P-PDGFRB-1:PDGFB-1d
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:P-PDGFRA-
PDGFRA-1
PDGFRB-1
FYN-2
P-PDGFRB-1:PDGFB-1d
PDGFB-1dimer:PDGFRA
PDGFA-2dimer:PDGFRA
P-EPHA2-1:EFNA
PTPN1-1
CBL-1
PDGFC-2dimer:PDGFRA
PDGFB-1dimer:PDGFRA
P-PDGFRA-1:PDGFA-2d
P-PDGFRB-1:PDGFD-1d
P-CDH1-1
PDGFB-1
P-PDGFRB-1:P-PDGFRA-
P-PDGFRA-1:PDGFB-1d
P-PDGFRB-1:PDGFB-1d
SRC-3
Active-PI3K:P-PDGFRB
PDGFB-1dimer:PDGFRB
PDGFA-2
P-PDGFRB-1:PDGFD-1d
NRAS-1:GDP
P-PDGFRA-1:PDGFC-2d
PLCG
P-FYN-2
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
NRAS-1:GTP
PDGFD-1
VAV
PDGFD-1dimer
KRAS-2:GTP
TNK2-1
PIP3
P-SP1-1
PTPN2-2
CDH1-1
P-VAV
P-PTK2-1
P-PLCG
PIK3CA-2:PIK3R1-1
PDGFC-2
PDGFA-2dimer
PDGFA-2dimer:PDGFRA
Active-PI3K:P-PTK2-1
PDGFC-2dimer
PDGFD-1dimer:PDGFRB
Active-PI3K:P-PDGFRA
P-PDGFRA-1:PDGFB-1d
Active-PI3K:P-PDGFRB
PDGFB-1dimer
P-PDGFRB-1:P-PDGFRA-
Active-PI3K:P-PDGFRA
Active-PI3K:P-PDGFRB
NFKB2-1:RELB-1
PTK2-1
KRAS-2:GDP
P-PDGFRB-1:PDGFD-1d
PDGFA-2dimer:PDGFRA
SHC1-3
P-PDGFRA-1:PDGFA-2d
PDGFB-1dimer:PDGFRA
P-TNK2-1
PDGFA-2dimer:PDGFRA
40
30
20
10
0
-10
-20
-30
-40

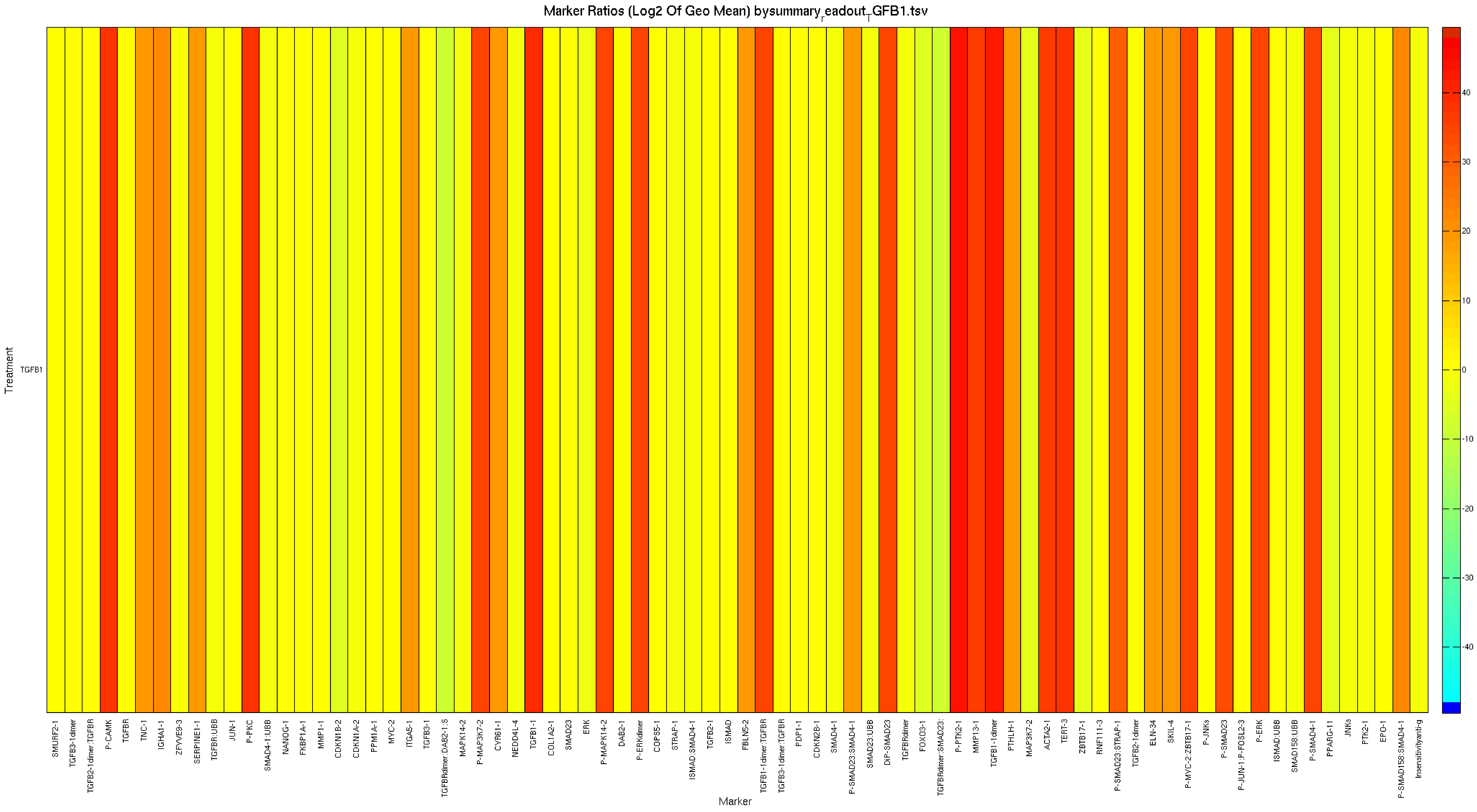

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_PGF.tsv
Treatment
PGF
Marker
FLT4-3
GRB2-1:SOS1-1
PGF-2
PTK2-1
VEGFC-1
KDR-1
P-KDR-1dimer:VEGFA-
PTPN11-3
FLT1-1
CSK-1
VEGFB-2
FLT4-3dimer:VEGFC-1
VEGFA-7
FLT1-1dimer:VEGFB-2
P-FLT4-3dimer:FIGF-
P-EPHA2-1:EFNA
Active-PI3K:P-FLT4-3
P-FLT4-3dimer:VEGFC
Active-PI3K:P-FLT1-1
IP3
P-FGFR:FGF
P-KDR-1dimer:VEGFA-
P-KDR-1dimer:VEGFC-
P-KDR-1dimer:FIGF-1
Active-PI3K:P-KDR-1
FLT1-1dimer:PGF-2
P-FLT1-1dimer:VEGFB
KDR-1dimer:VEGFC-1
P-FLT1-1dimer:VEGFB
FIGF-1
THBS1-1
Sustainedangiogenes
CD36-1
P-KDR-1dimer:VEGFC-
FLT1-1dimer
PLCG
VHL-1
ARNT-1:P-HIF1A-1
CD36-1:THBS1-1
P-FLT4-3dimer:FIGF-
Active-PI3K:P-KDR-1
KRAS-2:GTP
PTPRJ-1
PIP3
P-SP1-1
KDR-1dimer:VEGFA-7
P-PTPN11-3
P-PLCG
PIK3CA-2:PIK3R1-1
Active-PI3K:P-KDR-1
Active-PI3K:P-FLT1-1
P-FLT4-3dimer:VEGFC
DAG
P-FLT1-1dimer:VEGFA
FLT4-3dimer:FIGF-1
P-PTPN11-3:CSK-1
P-FLT1-1dimer:PGF-2
Active-PI3K:P-FLT1-1
KDR-1dimer:FIGF-1
FLT4-3dimer
FLT1-1dimer:VEGFA-7
P-KDR-1dimer:FIGF-1
Active-PI3K:P-FLT4-3
P-FLT1-1dimer:VEGFA
KDR-1dimer
NFKB2-1:RELB-1
KRAS-2:GDP
SHC1-3
P-FLT1-1dimer:PGF-2
P-TP53-1
ARNT2-1:P-HIF1A-1
40
30
20
10
0
-10
-20
-30
-40


Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_P$RL.tsv
Treatment
PRL
Marker
PRLR-6:GH1-1:JAK2-2:
GRB2-1:SOS1-1
PRL-1
JAK2-2
PRLR-6:GH1-1:FYN-2
PRLR-6:PRL-1:JAK2-2:
TEC-1
PRLR-6:GH1-1:JAK2-2:
RRAS-1:GTP
P-JAK2-2:PRLR-6:GH1-
P-FYN-2:PRLR-6:GH1-1
P-IRF1-1
P-NEK3-5
PRLR-6
PRLR-6:PRL-1:FYN-2
NEK3-5
P-STAT5
PTPN1-1
GH1-1
P-STAT3-1
SOCS2-1
BCL2L1-1
SRC-3
P-JAK2-2:PRLR-6:GH1-
CISH-3
PTPN6-4
NRAS-1:GDP
HRAS-2:GDP
PLCG
HRAS-2:GTP
NRAS-1:GTP
VAV
P-TEC-1
KRAS-2:GTP
PRLR-6:PRL-1:JAK2-2
P-VAV
P-PTK2-1
P-STAT1-2
P-JAK2-2:PRLR-6:PRL-
SOCS1-1
STAT5
P-PLCG
PRLR-6:PRL-1
PRLR-6:PRL-1:SRC-3
IL2-1
PRLR-6:GH1-1
PRLR-6:GH1-1:JAK2-2
IRS1-1
RRAS-1:GDP
PRLR-6:GH1-1:SRC-3
PRLR-6:PRL-1:JAK2-2:
PRLR-6:SOCS2-1
P-ETS2-1
IRF1-1
P-FYN-2:PRLR-6:PRL-1
STAT1-2
P-IRS1-1
P-JAK2-2:PRLR-6:PRL-
P-STAT5dimer
STAT3-1
FYN-2
PTK2-1
KRAS-2:GDP
SOCS3-1
SHC1-3
40
30
20
10
0
-10
-20
-30
-40

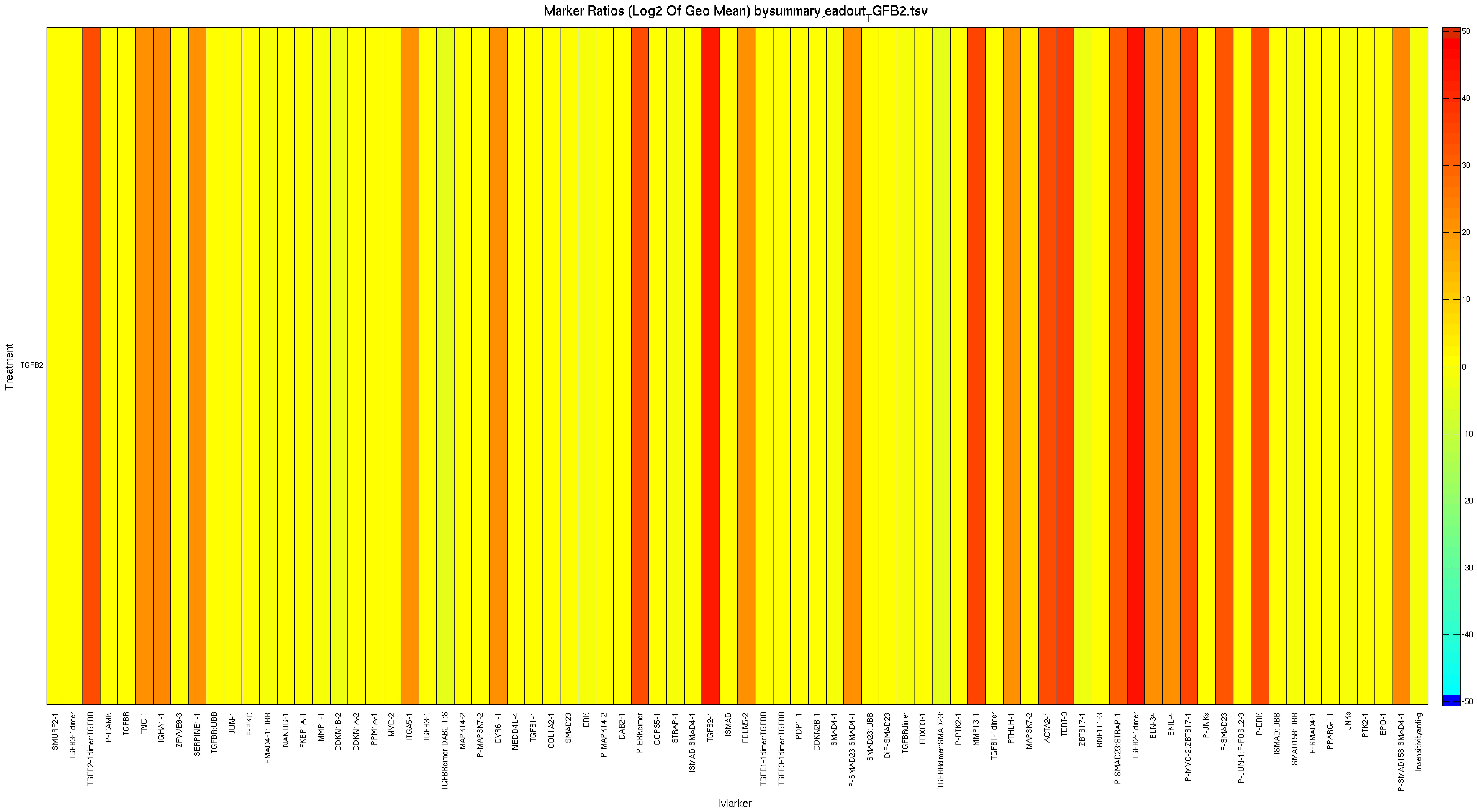

Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{P}$SPN.tsv
Treatment
PSPN
Marker
GDNF-1:RET-1
GRB2-1:SOS1-1
RET-1
NRTN-1
RRAS-1:GTP
CRK-1
PSPN-1
GDNF-1
EGR1-1
P-NCK1-1
ARTN-1:RET-1:GRB2-1:
Active-PI3K:NRTN-1:R
P-CRK-1
ARTN-1
NRAS-1:GDP
HRAS-2:GDP
PLCG
HRAS-2:GTP
NRAS-1:GTP
NRTN-1:RET-1
GDNF-1:RET-1:GRB2-1:
KRAS-2:GTP
NCK1-1
ARTN-1:RET-1
PIP3
P-SP1-1
P-PLCG
PIK3CA-2:PIK3R1-1
SP3-1
NRTN-1:RET-1:GRB2-1:
Active-PI3K:GDNF-1:R
Active-PI3K:PSPN-1:R
PSPN-1:RET-1:GRB2-1:
P-JNKs
RRAS-1:GDP
JNKs
KRAS-2:GDP
Active-PI3K:ARTN-1:R
SHC1-3
PSPN-1:RET-1
40
30
20
10
0
-10
-20
-30
-40

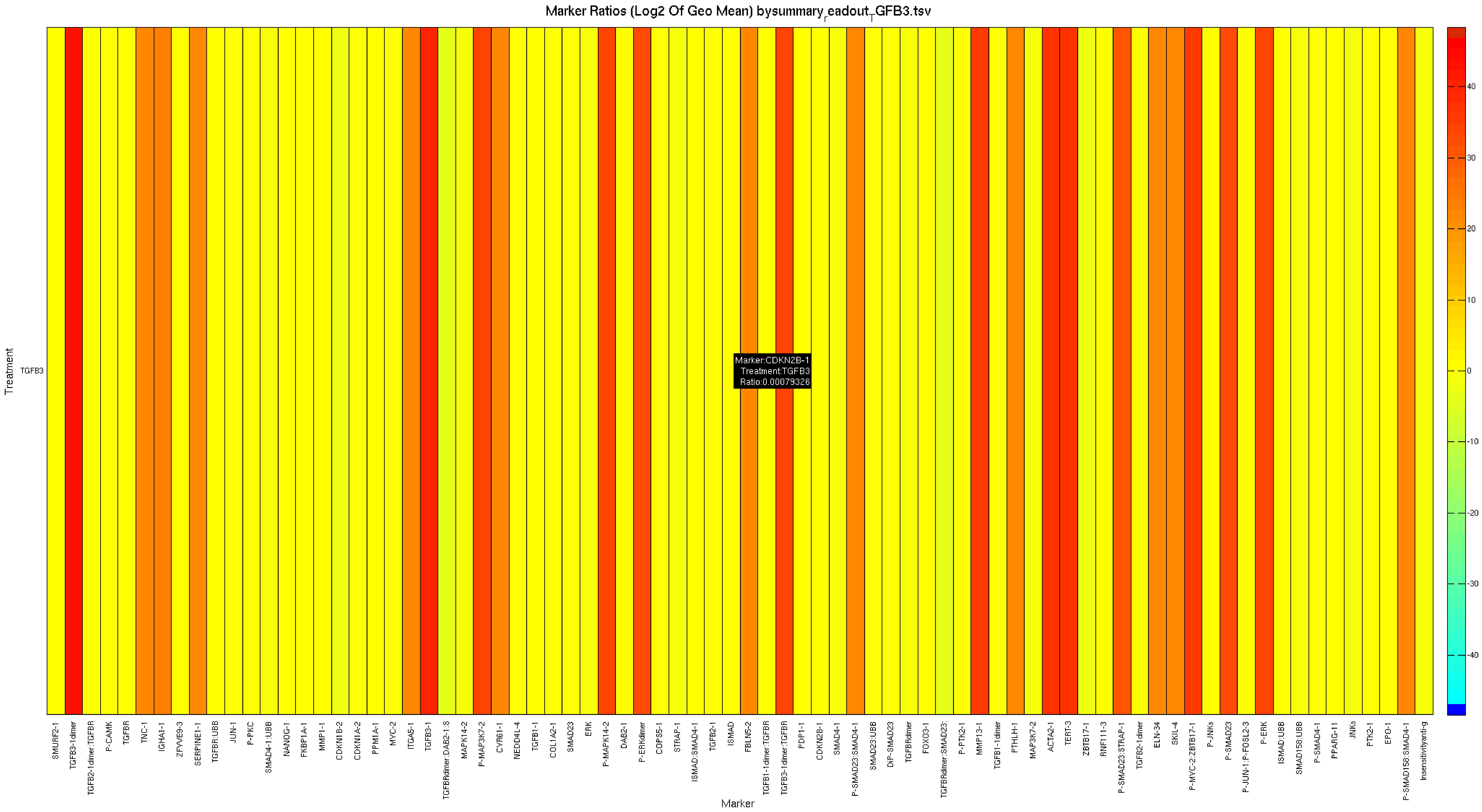

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_Testosterone.tsv
Treatment
Testosterone
SRD5A2-2
Testosterone
Dihydrotestosterone(
AR-1:Dihydrotestoste
SRD5A1-1
SRD5A3-1
NKX3-1-1
AR-1
Acceptor
KLK3-3
Marker
15
10
5
0
-5
-10
-15

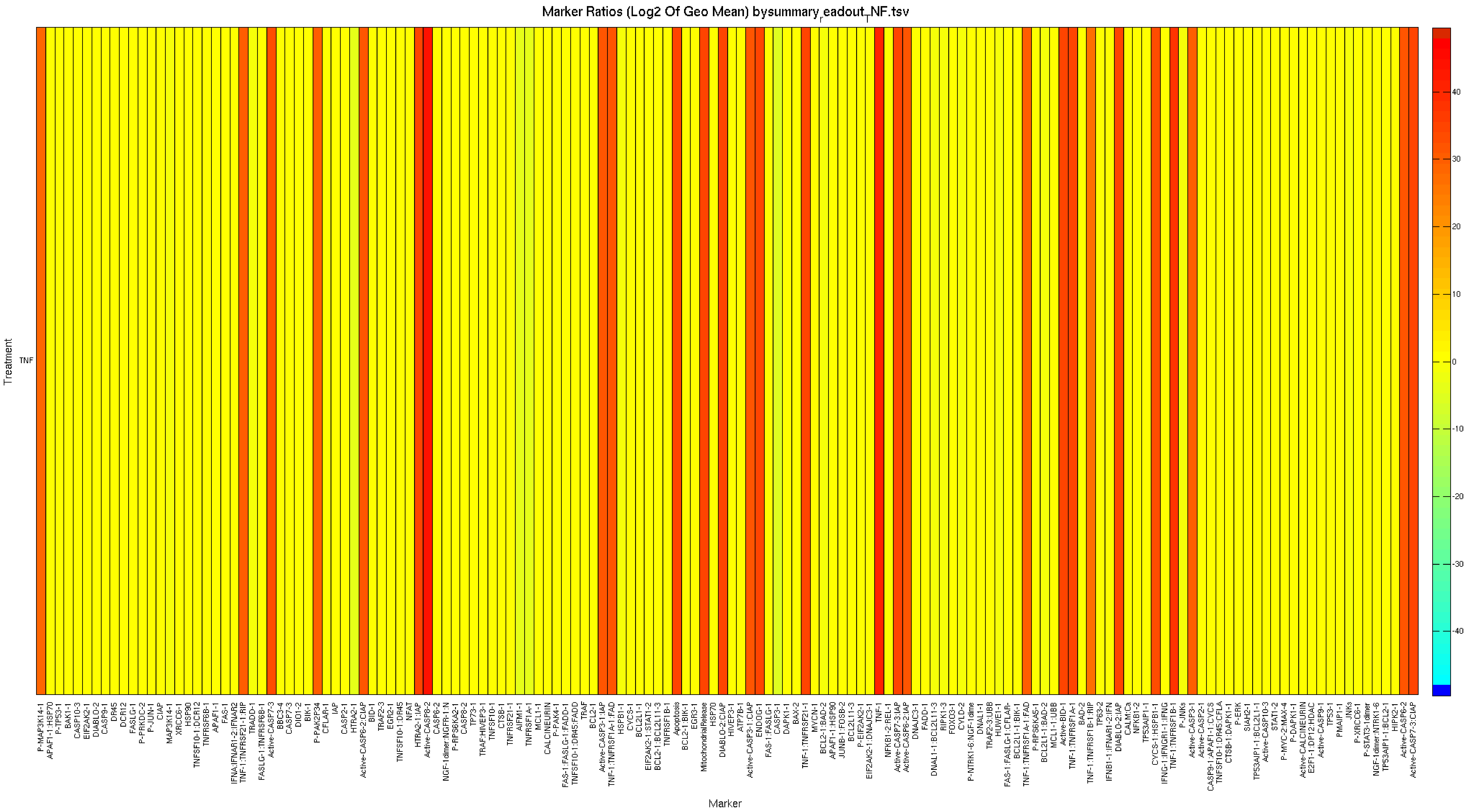

Marker Ratios (Log2 Of Geo Mean) bysummary_readout_TGFA.tsv
Treatment
TGFA
Marker
Marker:EGFR-5:BTC-1
Treatment:TGFA
Ratio:0
50
40
30
20
10
0
-10
-20
-30
-40
-50



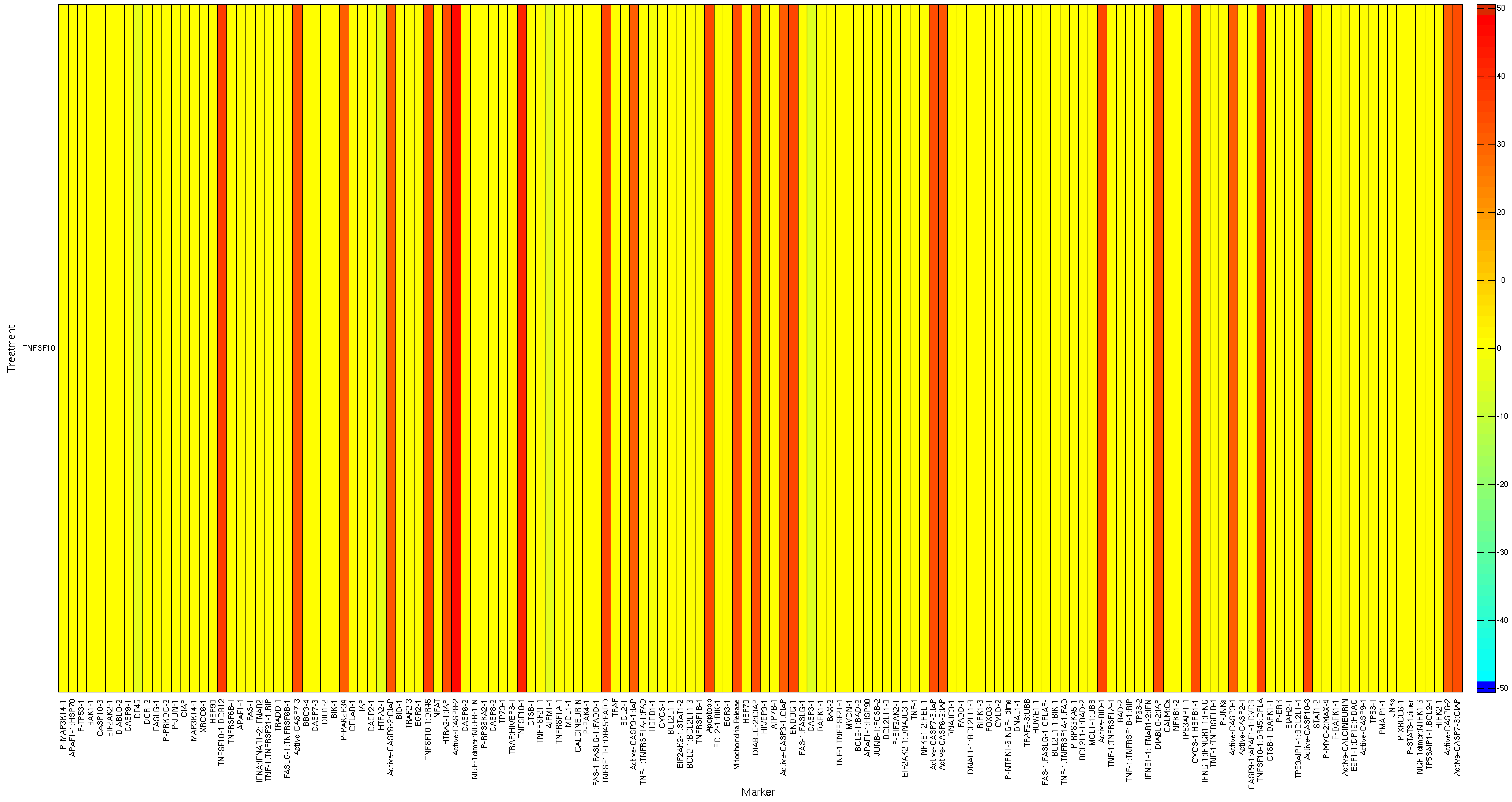
Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_T$GFB1.tsv


Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{T}$GFB2.tsv


Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_T$GFB3.tsv
Treatment
TGFB3
Marker:CDKN2B-1
Treatment:TGFB3
Ratio:0.00079326
40
30
20
10
0
-10
-20
-30
-40
SMURF2-1
TGFB3-1dimer
TGFB2-1dimer:TGFBR
P-CAMK
TGFBR
TNC-1
IGHA1-1
ZFYVE9-3
SERPINE1-1
TGFBR:UBB
JUN-1
P-PKC
SMAD4-1:UBB
NANOG-1
FKBP1A-1
MMP1-1
CDKN1B-2
CDKN1A-2
PPM1A-1
MYC-2
ITGA5-1
TGFB3-1
TGFBRdimer:DAB2-1:S
MAPK14-2
P-MAP3K7-2
CYR61-1
NEDD4L-4
TGFB1-1
COL1A2-1
SMAD23
ERK
P-MAPK14-2
DAB2-1
P-ERKdimer
COPS5-1
STRAP-1
ISMAD:SMAD4-1
TGFB2-1
ISMAD
FBLN5-2
TGFB1-1dimer:TGFBR
TGFB3-1dimer:TGFBR
PDP1-1
CDKN2B-1
SMAD4-1
P-SMAD23:SMAD4-1
SMAD23:UBB
DiP-SMAD23
TGFBRdimer
FOXO3-1
TGFBRdimer:SMAD23:
P-PTK2-1
MMP13-1
TGFB1-1dimer
PTHLH-1
MAP3K7-2
ACTA2-1
TERT-3
ZBTB17-1
RNF111-3
P-SMAD23:STRAP-1
TGFB2-1dimer
ELN-34
SKIL-4
P-MYC-2:ZBTB17-1
P-JNKs
P-SMAD23
P-JUN-1:P-FOSL2-3
P-ERK
ISMAD:UBB
SMAD158:UBB
P-SMAD4-1
PPARG-11
JNKs
PTK2-1
EPO-1
P-SMAD158:SMAD4-1
Insensitivityanti-g
Marker


Marker Ratios (Log2 Of Geo Mean) bysummary_readout_TNF.tsv
Treatment
TNF
Marker
40
30
20
10
0
-10
-20
-30
-40
P-MAP3K14-1
APAF1-1:HSP70
P-TP53-1
BAK1-1
CASP10-3
EIF2AK2-1
DIABLO-2
CASP9-1
DR45
DCR12
FASLG-1
P-PRKDC-2
P-JUN-1
CIAP
MAP3K14-1
XRCC6-1
HSP90
TNFSF10-1:DCR12
TNFRSF6B-1
APAF1-1
FAS-1
IFNA:IFNAR1-2:IFNAR2
TNF-1:TNFRSF21-1:RIP
TRADD-1
FASLG-1:TNFRSF6B-1
Active-CASP7-3
BBC3-4
CASP7-3
DIO1-2
BIK-1
P-PAK2P34
CFLAR-1
IAP
CASP2-1
HTRA2-1
Active-CASP6-2:CIAP
BID-1
TRAF2-3
EGR2-1
TNFSF10-1:DR45
NFAT
HTRA2-1:IAP
Active-CASP8-2
CASP6-2
NGF-1dimer:NGFR-1:N
P-RPS6KA2-1
CASP8-2
TP73-1
TRAF:HIVEP3-1
TNFSF10-1
CTSB-1
TNFRSF21-1
AIFM1-1
TNFRSF1A-1
MCL1-1
CALCINEURIN
P-PAK4-1
FAS-1:FASLG-1:FADD-1
TNFSF10-1:DR45:FADD
TRAF
BCL2-1
Active-CASP3-1:IAP
TNF-1:TNFRSF1A-1:FAD
HSPB1-1
CYCS-1
BCL2L1-1
EIF2AK2-1:STAT1-2
BCL2-1:BCL2L11-3
TNFRSF1B-1
Apoptosis
BCL2-1:BIK-1
EGR3-1
MitochondrialRelease
HSP70
DIABLO-2:CIAP
HIVEP3-1
ATP7B-1
Active-CASP3-1:CIAP
ENDOG-1
FAS-1:FASLG-1
CASP3-1
DAPK1-1
BAX-2
TNF-1:TNFRSF21-1
MYCN-1
BCL2-1:BAD-2
APAF1-1:HSP90
JUNB-1:FOSB-2
BCL2L11-3
P-EIF2AK2-1
EIF2AK2-1:DNAJC3-1
TNF-1
NFKB1-2:REL-1
Active-CASP7-3:IAP
Active-CASP6-2:IAP
DNAJC3-1
FADD-1
DNAL1-1:BCL2L11-3
RIPK1-3
FOXO3-1
CYLD-2
P-NTRK1-6:NGF-1dime
DNAL1-1
TRAF2-3:UBB
HUWE1-1
FAS-1:FASLG-1:CFLAR-
BCL2L1-1:BIK-1
TNF-1:TNFRSF1A-1:FAD
P-RPS6KA5-1
BCL2L1-1:BAD-2
MCL1-1:UBB
Active-BID-1
TNF-1:TNFRSF1A-1
BAD-2
TNF-1:TNFRSF1B-1:RIP
TP63-2
IFNB1-1:IFNAR1-2:IFN
DIABLO-2:IAP
CALM:Ca
NFKB1-2
TP53AIP1-1
CYCS-1:HSPB1-1
IFNG-1:IFNGR1-1:IFNG
TNF-1:TNFRSF1B-1
P-JNKs
Active-CASP3-1
Active-CASP2-1
CASP9-1:APAF1-1:CYCS
TNFSF10-1:DR45:CFLA
CTSB-1:DAPK1-1
P-ERK
SIAH2-1
TP53AIP1-1:BCL2L1-1
Active-CASP10-3
STAT1-2
P-MYC-2:MAX-4
P-DAPK1-1
Active-CALCINEURIN
E2F1-1:DP12:HDAC
Active-CASP9-1
TP53-1
PMAIP1-1
JNKs
P-XRCC6-1
P-STAT3-1dimer
NGF-1dimer:NTRK1-6
TP53AIP1-1:BCL2-1
HIPK2-1
Active-CASP6-2
Active-CASP7-3:CIAP

Marker Ratios (Log2 Of Geo Mean) bysummary$_r$eadout$_T$NFSF10.tsv



Marker Ratios (Log2 Of Geo Mean) bysummary$_{r}$eadout$_{T}$SLP.tsv