Literaturverzeichnis

[1] **Agarraberes, J. and F. Dice.** 2001. Protein translocation across membranes. Biochim Biophys Acta **1513**:1-24.

[2] **Agne, B., M. Meindl, N, K. Niederhoff, H. Einwachter, P. Rehling, A. Sickmann, E. G. W. Meyer, H and W. H. Kunau.** 2003. Pex8p: an intraperoxisomal organizer of the peroxisomal import machinery. Mol Cell **11**:635-646.

[3] **Agne, B.** Untersuchungen zur Funktion von RING-Finger-Proteinen beim peroxisomalen Proteinimport der Hefe Saccharomyces cerevisiae. Ruhr Universität Bochum 2003.

[4] **Albertini, M., P. Rehling, R. Erdmann, W. Girzalsky, J. A. K. Kiel, M. Veenhuis and W.-H. Kunau.** 1997. Pex14p, a Peroxisomal Membrane Protein Binding Both Receptors of the Two PTS-Dependent Import Pathways. Cell **89**:83-92.

[5] **Albertini, M., P. Rehling, R. Erdmann, W. Girzalsky, J. A. K. W. Kiel, M. Veenhuis and W. H. Kunau.** 1997. Pex14p, a Peroxisomal Membrane Protein Binding Both Receptors of the Two PTS-Dependent Import Pathways. Cell **89**:83-92.

[6] **Baerends, R. J., F. A. Salomons, K. N. Faber, J. A. K. W. Kiel, I. J. van der Klei and M. Veenhuis.** 1997. Deviant Pex3p levels affect normal peroxisome formation in Hansenula polymorpha: high steady-state levels of the protein fully abolish matrix protein import. Yeast **13**:1437-1448.

[7] **Baerends, R. J., S. W. Rasmussen, R. E. Hilbrands, M. van der Heide, K. N. Faber, P. T. W. Reuvekamp, J. A. K. W. Kiel, J. M. Cregg, I. J. van der Klei and M. Veenhuis.** 1996. The Hansenula polymorpha PER9 Gene Encodes a Peroxisomal Membrane Protein Essential for Peroxisome Assembly and Integrity. J Biol Chem **271**:8887-8894.

[8] **Bednarek, S. Y., L. Orci and R. Schekman.** 1996. Traffic COPs and the formation of vesicle coats. Trends Cell Biol **6**:468-473.

[9] **Bednarek, S. Y., L. Orci and R. Schekman.** 1996. Traffic COPs and the formation of vesicle coats. Trends in Cell Biology **6**:468-473.

[10] **Bellu, A. R., M. Komori, I. J. van Der Klei, J. A. Kiel and M. Veenhuis.** 2001. Peroxisome Biogenesis and Selective Degradation Converge at Pex14p. J Biol Chem **276**:44570-44574.

[11] **Biardi, L. and S. K. Krisans.** 1996. Compartmentalization of cholesterol biosynthesis Conversion of mevallonate to farnesyl diphosphat occurs in the peroxisomes. Journal of Biological Chemestry **271**:1785-1788.

[12] **Birschmann, I.** Funktionsanalysen der AAA Peroxine Pex1p und Pex6p aus Saccharomyces cerevisiae. Ruhr Universität Bochum 2001.

[13] **Blanc, C., C. Schlick, A. Dekker, A. Richardson, P. King, B. V. Smith and S. Sutanthavibul.** 2004. Xfig 3.2.5.

www.xfig.org

[14] **Brodsky J L, Goeckeler J, S. R.** 1995. BiP and Sec63p are required for both co- and posttranslational protein translocation into the yeast endoplasmic reticulum. Proc Natl Acad Sci USA **92**:9643-6.

[15] **Brosius, U., T. Dehmel and J. Gartner.** 2001. Two different targeting signals direct human PMP22 to peroxisomes. J Biol Chem **277**:774-84.

[16] **Caspary, F., A. Shevchenko, M. Wilm and B. Seraphin.** 1999. Partial purification of the yeast U2 snRNP reveals a novel yeast pre-mRNA splicing factor required for pre-spliceosome assembly. Embo J **18**:3463-74.

[17] **Cherel, I. and P. Thuriaux.** 1995. The IFH1 gene product interacts with a fork head protein in Saccharomyces cerevisiae. Yeast **11**:261-70.

[18] **Collins, C. S., J. E. Kalish, J. C. Morrell, J. M. McCaffery and S. J. Gould.** 2000. The peroxisome biogenesis factors Pex4p, Pex22p, Pex1p, and Pex6p act in the terminal steps of peroxisomal matrix protein import. Mol Cell Biol **20**:7516-26.

[19] **Dalheimer, M. D.** 2000. LaTeX kurz und gut. O'Reilly Verlag

[20] **Dannenberg, J.** Molekularbiologische Untersuchungen zum PAS3-Gen aus S cerevisiae. Ruhr-Universität Bochum 1995.

[21] **De Duve, C. and P. Baudhuin.** 1966. Peroxisomes (microbodies and related particles). Physiol Rev **46**:323-57.

[22] **Dolinski, K., R. Balakrishnan, K. R. Christie, M. C. Costanzo, S. S. Dwight, S. R. Engel, D. G. Fisk, J. E. Hirschman, E. L. Hong, R. Nash, R. Oughtred, C. L. Theesfeld, G. Binkley, C. Lane, M. Schroeder, D. S. Sethuraman, A, S. Weng, S. Miyasato, R. Andrada, D. Botstein and J. M. Cherry.** 2004(August). Saccharomyces Genome Database.

www.yeastgenome.org

[23] **Eckert, J. H. and N. Johnsson.** 2003. Pex10p links the ubiquitin conjugating enzyme Pex4p to the protein import machinery of the peroxisome. J Cell Sci **216**:3623-34.

[24] **Eckert, J.** Kartierung der Interaktionen peroxisomaler Membranproteine in Saccharomyces cerevisiae. Universität zu Köln 2001.

[25] **Einwachter, H., S. Sowinski, W. H. Kunau and W. Schliebs.** 2001. Yarrowia lipolytica Pex20p, Saccharomyces cerevisiae Pex18p/Pex21p and mammalian Pex5pL fulfil a common function in the early steps of the peroxisomal PTS2 import pathway. EMBO Rep **2**:1035-9.

[26] **Elgersma, Y., L. Kwast, A. Klein, T. Voorn-Brouwer, M. van den Berg, B. Metzig, T. America, H. F. Tabak and B. Distel.** 1996. The SH3 domain of the Saccharomyces cerevisiae peroxisomal membrane protein Pex13p functions as a docking site for Pex5p, a mobile receptor for the import of PTS1 containing proteins. J Cell Biol **135**:97-109.

[27] **Elgersma, Y., L. Kwast, M. van den Berg, W. B. Snyder, B. Distel, S. Subramani and H. F. Tabak.** 1997. Overexpression of Pex15p, a phosphorylated peroxisomal integral membrane protein required for peroxisome assembly in S cerevisiae, causes proliferation of the endoplasmic reticulum membrane. Embo J **16**:7326-41.

[28] **Erdmann, R., M. Veenhuis, D. Mertens and W. H. Kunau.** 1989. Isolation of peroxisomal-deficient mutants of Saccharomyces cerevisiae. Proc Natl Acad Sci USA **86**:5419-5423.

[29] **Erdmann, R. and G. Blobel.** 1995. Giant peroxisomes in oleic acid induced Saccharomyces cerevisiae lacking the peroxisomal membrane protein Pmp27p. J Cell Biol **128**:509-523.

[30] **Erdmann, R. and G. Blobel.** 1996. Identification of Pex13p a Peroxisomal Membrane Receptor for PTS1 Recognition Factor. J Cell Biol **135**:111-121.

[31] **Erdmann, R. and W. H. Kunau.** 1994. Purification and immunolocalization of the peroxisomal 3-oxoacyl-CoA thiolase from Saccharomyces cerevisiae. Yeast **10**:1173-1182.

[32] **Faber, K. N., G. J. Haan, R. J. Baerends, A. M. Kram and M. Veenhuis.** 2002. Normal peroxisome development from vesicles induced by truncated Hansenula polymorpha Pex3p. J Biol Chem **277**:11026-33.

[33] **Fang, Y., J. C. Morrell, J. M. Jones and S. J. Gould.** 2004. PEX3 functions as a PEX19 docking factor in the import of class I peroxisomal membrane proteins. J Cell Biol **164**:863-75.

[34] **Finke, K., K. Plath, S. Panzner, S. Prehn, T. A. Rapoport, E. Hartmann and T. Sommer.** 1996. A second trimeric complex containing homologs of the Sec61p complex functions in protein transport across the ER membrane of S cerevisiae. Embo J **15**:1482-1494.

[35] **Fransen, M., T. Wylin, C. Brees, G. P. Mannaerts and P. P. Van Veldhoven.** 2001. Human Pex19p binds peroxisomal integral membrane proteins at regions distinct from their sorting sequences. Mol Cell Biol **21**:4413-24.

[36] **Fujiki, Y., A. Rachubinski, R and B. Lazarow, P.** 1984. Synthesis of a major integral membrane polypeptide of rat liver peroxisomes on free polysomes. Proc Natl Acad Sci USA **81**:7127-31.

[37] **Fujiki, Y.** 2000. Peroxisome biogenesis and peroxisome biogenesis disorders. FEBS Lett **476**:42-6.

[38] **Garza, M. M. d. l., U. Schultz-Borchard, J. W. Crabb and W. H. Kunau.** 1985. Peroxisomal β-oxidation system of Candida tropicalis Purfification of a multifunctional protein processing enoyl-CoA hydratase, 3-hydroxyl-CoA dhydrogenase and 3-hydroxyacyl-CoA epimerase activities. Eur J Biochem **148**:285-291.

[39] **Gavva, N. R., S. C. Wen, P. Daftari, M. Moniwa, W. M. Yang, L. P. Yang-Feng, E. Seto, J. R. Davie and C. K. Shen.** 2002. NAPP2, a Peroxisomal Membrane Protein, Is Also a Transcriptional Corepressor. Genomics **79**:423-31.

[40] **Geuze, H. J., J. L. Murk, A. K. Stroobants, J. M. Griffith, M. J. Kleijmeer, A. J. Koster, A. J. Verkleij, B. Distel and T. H. F.** 2003. Involvement of the endoplasmic reticulum in peroxisome formation. Mol Biol Cell **14**:2900-2907.

[41] **Ghaedi, K., S. Tamura, K. Okumoto, Y. Matsuzono and Y. Fujiki.** 2000. The peroxin pex3p initiates membrane assembly in peroxisome biogenesis. Mol Biol Cell **11**:2085-102.

[42] **Gietz, R. D. and A. Sugino.** 1988. New yeast-Escherichia coli shuttle vectors constructed with in vitro mutagenized yeast lacking six-base pair restrictuion sites. Gene **74**:527-534.

[43] **Girzalsky, W., P. Rehling, K. Stein, J. Kipper, L. Blank, W. H. Kunau and R. Erdmann.** 1999. Involvement of Pex13p in Pex14p localization and peroxisomal targeting signal 2-dependent protein import into peroxisomes. J Cell Biol **144**:1151-62.

[44] **Gould, S. J., G. A. Keller, N. Hosken, J. Wilkinson and S. Subramani.** 1989. A conserved tripeptide sorts proteins to peroxisomes. J Cell Biol **108**:1657-1664.

[45] **Gould, S. J., J. E. Kalish, J. C. Morrell, J. Bjorkman, A. J. Urquhart and D. I. Crane.** 1996. Pex13p is an SH3 protein of the peroxisome membrane and a docking factor for the predominantly cytoplasmic PTS1 receptor. J Cell Biol **135**:85-95.

[46] **Gould, S. J. and D. Valle.** 1998. Peroxisome biogenesis disorders. Trends Genet **16**:340-345.

[47] **Guan, J., P. E. Stromhaug, M. D. George, P. Habibzadegah-Tari, A. Bevan, J. Dunn, W A and D. J. Klionsky.** 2001. Cvt18/Gsa12 Is Required for Cytoplasm-to-Vacuole Transport, Pexophagy, and Autophagy in Saccharomyces cerevisiae and Pichia pastoris. Mol Biol Cell **12**:3821-3838.

[48] **Götte, K., W. Girzalsky, M. Linkert, E. Baumgart, S. Kammerer, W.-H. Kunau and R. Erdmann.** 1998. Pex19p, a Farnesylated Protein Essential for Peroxisome Biogenesis. Mol Cell Biol **18**:616-628.

[49] **Haan, G. J., K. N. Faber, R. J. Baerends, A. Koek, A. Krikken, J. A. Kiel, I. J. Van Der Klei and M. Veenhuis.** 2002. Hansenula polymorpha Pex3p is a peripheral component of the peroxisomal membrane. J Biol Chem **277**:26609-17.

[50] **Harding, T. M., A. Hefner-Gravink, M. Thumm and D. J. Klionsky.** 1996. Genetic and Phenotypic Overlap between Autophagy and the Cytoplasm to Vacuol Protein Targeting Pathway. J Biol Chem **271**:17621-17624.

[51] **Harding, T. M., K. A. Morano, S. V. Scott and D. J. Klionsky.** 1995. Isolation and Characterization of Yeast Mutants in the Cytoplasm to Vacuole Protein Targeting Pathway. J Cell Biol **131**:591-602.

[52] **Hashimoto, T.** 1982. Individual peroxiosmal beta-oxidation enzymes. Ann N Y Acad Sci **386**:5-12.

[53] **Hazra, P. P., I. Suriapranata, W. B. Snyder and S. Subramani.** 2002. Peroxisome Remnants in pex3Delta Cells and the Requirement of Pex3p for Interactions Between the Peroxisomal Docking and Translocation Subcomplexes. Traffic **3**:560-74.

[54] **Heiland, I.** Charakterisierung des Pex-Phänotyps von vakuolären und Sekretionsmutanten unter besonderer Berücksichtigung von Pex3p. Freie Universität Berlin 2000.

[55] **Hell, K., J. M. Herrmann, E. Pratje, W. Neupert and R. A. Stuart.** 1998. Oxa1p, an essential component of the N-tail protein export machinery in mitochondria. Proc Natl Acad Sci U S A **95**:2250-5.

[56] **Hettema, E. H., W. Girzalsky, M. van den Berg, R. Erdmann and B. Distel.** 2000. Saccharomyces cerevisiae Pex3p and Pex19p are required for proper localization and stability of peroxisomal mebrane proteins. EMBO J **19**:223-233.

[57] **Holroyd, C. and R. Erdmann.** 2001. Protein translocation machineries of peroxisomes. FEBS Lett **501**:6-10.

[58] **Huh, W. K., J. V. Falvo, G. L. C, A. S. Carroll, R. W. Howson, J. S. Weissman and E. K. O'Shea.** 2003. Global analysis of protein localization in budding yeast. Nature **425**:671-2.

[59] **Hunt, J. E. and R. Trelease.** 2003. Sorting pathway and molecular targeting signals for the Arabidopsis peroxin 3. BBRC **314**:586-596.

[60] **Höhfeld, J., M. Veenhuis and W. H. Kunau.** 1991. PAS3, a Saccharomyces cerevisiae gene encoding a peroxisomal integral membrane protein essential for peroxisome biogenesis. J Cell Biol **114**:1167-1178.

[61] **Ichimura, Y., T. Kirisako, T. Takao, Y. Satomi, Y. Shimonishi, N. Ishihara, N. Mizushima, I. Tanida, E. Kominami, M. Ohsumi, T. Noda and Y. Ohsumi.** 2000. A ubiquitin-like system mediates protein lipidation. Nature **408**:488-92.

[62] **Incyte, C.** 2003 (June). Yeast proteome database. Incyte Corporation, 100 Cummings Center, Suite 420B, Beverly, MA 01915, proteome.incyte.com

[63] **Ishihara, N., M. Hamasaki, S. Yokota, K. Suzuki, Y. Kamada, A. Kihara, T. Yoshimori, T. Noda and Y. Ohsumi.** 2001. Autophagosome requires specific early Sec proteins for its formation and NSF/SNARE for vacuolar fusion. Mol Biol Cell **12**:3690-702.

[64] **Ito, T., T. Chiba, R. Ozawa, M. Yoshida, M. Hattori and Y. Sakaki.** 2001. A comprehensive two-hybrid analysis to explore the yeast protein interactome. Proc Natl Acad Sci USA **98**:4569-74.

[65] **Jedd, G. and N. H. Chua.** 2000. A new self-assembled peroxisomal vesicle required for efficient reselaing of the plasma membrane. Nature Cell Biol **2**:226-231.

[66] **Johnson, A. E.** 1997. Protein translocation at the ER membrane: a complex process becomes more so. Trends Cell Biol **7**:90-95.

[67] **Johnson, A.** 1997. Protein translocation at the ER membrane: a complex process becomes more so. Trends Cell Biol **7**:90-95.

[68] **Jones, J. M., J. C. Morrell and S. J. Gould.** 2001. Multiple distinct targeting signals in integral peroxisomal membrane proteins. J Cell Biol **153**:1141-50.

[69] **Jones, J. M., J. C. Morrell and S. J. Gould.** 2004. PEX19 is a predominantly cytosolic chaperone and import receptor for class 1 peroxisomal membrane proteins. J Cell Biol **164**:57-67.

[70] **Jüschke, C., D. Ferring, R. P. Jansen and M. Seedorf.** 2004. A Novel Transport Pathway for a Yeast Plasma Membrane Protein Encoded by a Localized mRNA. Curr Biol **14**:406-411.

[71] **Kaiser, C. and S. Ferro-Novick.** 1998. Transport from the endoplasmatic reticulum to the Golgi. Curr Opin Cell Biol **10**:477-482.

[72] **Kamada, Y., T. Funakoshi, T. Shintani, K. Nagano, M. Ohsumi and Y. Ohsumi.** 2000. Tor-mediated induction of autophagy via an Apg1 protein kinase complex. J Cell Biol **150**:1507-13.

[73] **Kim, J., S. V. Scott and D. J. Klionsky.** 2000. Alternative Protein Sorting Pathways. Int Rev Cytol **198**:153-201.

[74] **Kim, J., W. P. Huang, P. E. Stromhaug and D. J. Klionsky.** 2002. Convergence of multiple autophagy and cytoplasm to vacuole targeting components to a perivacuolar membrane compartment prior to de novo vesicle formation. J Biol Chem **277**:763-73.

[75] **Kimball, S. and P. Mattis.** 1991. Gimp 2.0. Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111 USA, www.gimp.org

[76] **Kirisako, T., M. Baba, N. Ishihara, K. Miyazawa, T. Ohsumi, M Yoshimori, T. Noda and Y. Ohsumi.** 1999. Formation process of autophagosomes is trace with Apg8p/Aut7p in yeast. J Cell Biol **147**:435-446.

[77] **Klein, A. T., M. van Den Berg, G. Bottger, H. F. Tabak and B. Distel.** 2002. Saccharomyces cerevisiae acyl-CoA oxidase follows a novel, non-PTS1, import pathway into peroxisomes that is dependent on Pex5p. J Biol Chem **277**:25011-9.

[78] **Klionsky, D. J., C. R and D. S. Yaver.** 1992. Aminopeptidase I of Saccharomyces cerevisiae is localized to the vacuole independent of the secretory pathway. J Cel Biol **119**:287-99.

[79] **Klionsky, D. J., J. M. Cregg, W. A. J. Dunn, S. D. Emr, Y. Sakai, I. V. Sandoval, A. Sibirny, S. Subramani, M. Thumm, M. Veenhuis and Y. Ohsumi.** 2003. A unified nomenclature for yeast autophagy-related genes. Dev Cell **5**:539-45.

[80] **Klionsky, D. J. and Y. Ohsumi.** 1999. Vacuolar import of proteins and organelles from the cytoplasm. Annu Rev Cell Dev Biol **15**:1-32.

[81] **Koch, H. G., M. Moswe and M. Müller.** 2003. Signal recognition particle-dependent protein targeting universal to all kingdoms of life. Rev Physiol Biochem Pharmacol **146**:55-94.

[82] **Koehler, C. M.** 2000. Protein translocation pathway of the mitochondrion. FEBS Letters **476**:27-31.

[83] **Krause, T.** Untersuchung zu peroxisomalen Membranproteinen unter besonderer Berücksichtigung des Pas3-Proteins in Saccharomyces cerevsiae. Ruhr Universität Bochum 1995.

[84] **Krisans, S. K.** 1992. The role of peroxisomes in cholesterol metabolism. Am J Respir Cell Mol Biol **7**:358-364.

[85] **Kruse, C., J. Frevert and H. Kindl.** 1981. Selective uptake by glyoxysomes of in vitro translated malate synthase. FEBS Letters **129**:36-38.

[86] **Kruse, C. and H. Kindl.** 1982. Integral proteins of glyoxisomal membranes. Ann NY Acad Sci **386**:499-501.

[87] **Kuma, A., N. Mizushima, N. Ishihara and Y. Ohsumi.** 2002. Formation of the approximately 350-kDa Apg12-Apg5 Apg16 multimeric complex, mediated by Apg16 oligomerization, is essential for autophagy in yeast. J Biol Chem **277**:18619-25.

[88] **Kunau, W. H., S. Bühne, M. M. de la Garza, C. Kionka, M. Mateblowski, U. Schultz-Borchard and R. Thieringer.** 1988. Comparative enzymology of β-oxidation. Biochem Soc Trans **16**:418-420.

[89] **Lambkin, G. R. and R. A. Rachubinski.** 2001. Yarrowia lipolytica Cells Mutant for the Peroxisomal Peroxin Pex19p Contain Structures Resembling Wild-Type Peroxisomes. Mol Biol Cell **12**:3353-64.

[90] **Lametschwandtner, G., C. Brocard, M. Fransen, P. van Veldhoven, J. Berger and A. Hartig.** 1998. The Difference in Recognition of Terminal Tripetides as Peroxisomal Targeting Signal 1 between Yeast and Human Is Due to Differnt Affinities of Their Receptor Pex5p to the Cognate Signal and to Residues Adjacent to It. J Biol Chem **273**:33635-33643.

[91] **Lazarow, P. B. and C. DeDuve.** 1976. A fatty acyl-CoA oxidazing system in rat liver peroxisomes; enhanced by clofibrate, a hydrolipidemic drug. Proc Natl Acad Sci USA **73**:2043-2046.

[92] **Lazarow, P. B. and Y. Fujiki.** 1985. Biogenesis of Peroxisomes. Annu Rev Cell Biol **1**:489-530.

[93] **Legesse-Miller, A., Y. Sagiv, R. Glozman and Z. Elazar.** 2002. Aut7p, a Soluble Autophagic Factor, Participates in Multiple Membrane Trafficking Proceses. J Biol Chem **275**:32966-32973.

[94] **Levine, T. P., C. A. Wiggins and S. Munro.** 2000. Inositol phosphorylceramide synthase is located in the Golgi apparatus of Saccharomyces cerevisiae. Mol Biol Cell **11**:2267-81.

[95] **Lin, Y., L. Sun, L. V. Nguyen, R. A. Rachubinski and H. M. Goodman.** 1999. The Pex16p homolog SSE1 and storage organelle formation in Arabidopsis seeds. Science **284**:328-30.

[96] **Lisenbee, C. S., S. K. Karnik and R. N. Trelease.** 2003. Overexpression and mislocalisation of a Tail-anchord GFP Redifines the Identity peroxisomal ER. Traffic **4**:491-501.

[97] **Lottspeich, F. and Zorbas.** 1998. Biochemie und Pathobiochemie. Spektrum Akademischer Verlag

[98] **Löffler, G. and P. E. Petrides.** 1997. Biochemie und Pathobiochemie. Springer-Verlag

[99] **Matsuzono, Y., N. Kinoshita, S. Tamura, N. Shimozawa, M. Hamasaki, K. Ghaedi, R. J. Wanders, Y. Suzuki, N. Kondo and Y. Fujiki.** 1999. Human PEX19: cDNA cloning by functional complementation, mutation analysis in a patient with Zellweger syndrome, and potential role in peroxisomal membrane assembly. Proc Natl Acad Sci U S A **96**:2116-21.

[100] **Mizushima, N., T. Noda, T. Yoshimoti, Y. Tanaka, T. Ishii, M. D. Goerge, D. J. Klionsky and Y. Ohsumi.** 1998. A protein conjugation system essential for autophagy. Nature **395**:395-398.

[101] **Mullen, R. T., C. S. Lisenbee, J. A. Miernyk and R. N. Trelease.** 1999. Peroxisomal membrane ascorbate peroxidase is sorted to a membranous network that resembles a subdomain of the endoplasmic reticulum. Plant Cell **11**:2167-85.

[102] **Mullen, R. T. and R. N. Trelease.** 2000. The sorting signals for peroxisomal membrane-bound ascorbate peroxidase are within its C-terminal tail. J Biol Chem **275**:16337-44.

[103] **Muntau, A. C., A. A. Roscher, W. H. Kunau and G. Dodt.** 2003. The interaction between human PEX3 and PEX19 characterized by fluorescence resonance energy transfer (FRET) analysis. Eur J Cell Biol **82**:333-342.

[104] **Müller, W. H., T. P. van der Krift, A. J. J. Krouwer, H. A. B. Wosten and L. H. M. van der Voort.** 1991. Localization of the pathway of the penicillin biosynthesis in Penicillium chrysogenum. The EMBO Journal **10**:489-496.

[105] **Nice, D. C., T. K. Sato, P. E. Stromhaug, S. D. Emr and D. J. Klionsky.** 2002. Cooperative Binding of the Cytoplasm to Vacuole Targeting Pathway Proteins, Cvt13 and Cvt20, to Phosphatidylinositol 3-Phosphate at the Pre-autophagosomal Structure Is Required for Selective Autophagy. J Biol Chem **277**:30198-30207.

[106] **Niedenthal, R. K., L. Riles, M. Johnston and J. H. Hegemann.** 1996. Green Fluorescent Protein as a Marker for Gene Expression and Subcellular Localization in Budding Yeast. Yeast **12**:773-786.

[107] **Noda, T., K. Suzuki and Y. Ohsumi.** 2002. Yeast autophagosomes: de novo formation of a membrane structure. Trends Cell Biol **12**:231-5.

[108] **Ohsumi, Y.** 2001. Molecular dissection of autophagy: two ubiquitin-like systems. Nat Rev Mol Cell Biol **2**:211-6.

[109] **Olesen, K.** 2004. pDRAW32 1.1.81. Acaclone Software medlem.spray.se/acaclone/start.htm

[110] **Otera, H., T. Harano, M. Honsho, K. Ghaedi, S. Mukai, A. Tanaka, A. Kawai, N. Shimizu and Y. Fujiki.** 2000. The mammalian peroxin Pex5pL, the longer isoform of the mobile peroxisome targeting signal (PTS) type 1 transporter, translocates the Pex7p PTS2 protein complex into peroxisomes via its initial docking site, Pex14p. J Biol Chem **275**:21703-14.

[111] **Otzen, M., U. Perband, D. Wang, R. J. Baerends, W.-H. Kunau, M. Veenhuis and I. J. Van der Klei.** 2004. Hansenula polymorpha Pex19p is essential for the formation of functional peroxisomal membranes. J Biol Chem **279**:19181-90.

[112] **Palmieri, L., H. Rottensteiner, W. Girzalsky, P. Scarcia, F. Palmieri and R. Erdmann.** 2001. Identification and functional reconstitution of the yeast peroxisomal adenine nucleotide transporter. Embo J **20**:5049-59.

[113] **Passreiter, M., M. Anton, D. Lay, R. Frank, C. Harter, F. T. Wieland, K. Gorgas and W. W. Just.** 1998. Peroxisome biogenesis: involvement of ARF and coatomer. J Cell Biol **141**:373-383.

[114] **Pemberton, L. F., R. J. S and G. Blobel.** 1999. Nuclear import of the TATA-binding protein: mediation by the karyopherin Kap114p and a possible mechanism for intranuclear targeting. J Cell Biol **145**:1407-17.

[115] **Perband, U.** Das peroxisomale Membranprotein Pex3p aus der Hefe Saccharomyces cerevisiae : Analyse des peroxisomalen Sortierungssignals und Identifikation von Bindungspartnern. Ruhr Universität Bochum 2002.

[116] **Platta, H., W. Girzalsky and R. Erdmann.** 2004. Ubiquitination of the peroxisomal import receptor Pex5p. Biochem J :.

[117] **Prinz, W. A., L. Grzyb, M. Veenhuis, J. A. Kahana, P. A. Silver and T. A. Rapoport.** 2000. Mutans Affecting the Structure of the Cortical Endoplasmatic Reticulum in Saccharomyces cerevisiae. J Cell Biol **150**:461-474.

[118] **Purdue, P. E. and P. B. Lazarow.** 2001. Pex18p Is Constitutively Degraded during Peroxisome Biogenesis. J Biol Chem **276**:47684-47689.

[119] **Rehling, P., A. Skaletz-Rorowski, W. Girzalsky, T. Voorn-Brouwer, M. M. Franse, B. Distel, M. Veenhuis, W. H. Kunau and R. Erdmann.** 2000. Pex8p, an intraperoxisomal peroxin of Saccharomyces cerevisiae required for protein transport into peroxisomes binds the PTS1 receptor pex5p. J Biol Chem **275**:3593-602.

[120] **Rehling, P., M. Marzioch, F. Niesen, E. Wittke, M. Veenhuis and W. H. Kunau.** 1996a. The import receptor for the peroxisomal targeting signal 2 (PTS2) in Saccharomyces cerevisiae is encoded by the PAS7 gene. EMBO J **15**:2901-2913.

[121] **Rhodin, J.** 1954. Correlation of ultrastructural organizaton and function in normal and experimentally changed peroxisomal convoluted tubule cells of the mouse kidney. Stockholm University, Aktiebolaget Godvil, Stockholm, Sweden :.

[122] **Rockmill, B., J. A. Engebrecht, H. Scherthan, J. Loidl and G. S. Roeder.** 1995. The yeast MER2 gene is required for chromosome synapsis and the initiation of meiotic recombination. Genetics **141**:49-59.

[123] **Rothman, J. E.** 1994. Mechanisms of intracellular protein transport. Nature **372**:55-63.

[124] **Rottensteiner, H., A. Kramer, S. Lorenzen, K. Stein, C. Landgraf, R. Volkmer-Engert and R. Erdmann.** 2004. Peroxisomal Membrane Proteins Contain Common Pex19p-binding Sites that Are an Integral Part of Their Targeting Signals. Mol Biol Cel **15**:3406-17.

[125] **Rottensteiner, H., K. Stein, E. Sonnenhol and E. R.** 2003. Conserved function of pex11p and the novel pex25p and pex27p in peroxisome biogenesis. Mol Biol Cell **14**:.

[126] **Sacksteder, K. A., J. M. Jones, S. T. South, X. Li, Y. Liu and S. J. Gould.** 2000. PEX19 binds multiple peroxisomal membrane proteins, is predominantly cytoplasmic, and is required for peroxisome membrane synthesis. J Cell Biol **148**:931-44.

[127] **Saidowsky, J., G. Dodt, K. Kirchberg, A. Wegner, W. Nastainczyk, W. H. Kunau and W. Schliebs.** 2001. The di-aromatic pentapeptide repeats of the human peroxisome import receptor PEX5 are separate high affinity binding sites for the peroxisomal membrane protein PEX14. J Biol Chem **276**:34524-9.

[128] **Salomons, F. A., I. J. van der Klei, A. M. Kram, W. Harder and M. Veenhuis.** 1997. Brefeldin A interferes with peroxisomal protein sorting in the yeast Hansenula polymorpha. FEBS Letters **411**:133-139.

[129] **Schepers, L., M. Casteels, J. Vamecq, G. Parmentier, P. P. V. Veldhoven and G. P. Mannaerts.** 1988. β-oxidation of the carboxyl side chain of prostaglandin E2 in rat liver peroxisomes and mitochondria. Journal of Biological Chemistry **263**:2724-2731.

[130] **Schliebs, W., J. Saidowsky, B. Agianian, G. Dodt, F. W. Herberg and W. H. Kunau.** 1999. Recombinant human peroxisomal targeting signal receptor PEX5 Structural basis for interaction of PEX5 with PEX14. J Biol Chem **274**:5666-73.

[131] **Schliebs, W. and W. H. Kunau.** 2004. Peroxisome membrane biogenesis: the stage is set. Curr Biol **14**:R397-399.

[132] **Schultis, J. K.** 1995. LaTeX-Tips. Prentice Hall Verlag GmbH

[133] **Scott, S. V., A. Hefner-Gravink, K. Morano, T. Noda, Y. Ohsumi and D. J. Klionsky.** 1996. Cytoplasm-to-vacuole targeting and autophagy employ the same machinery to deliver proteins to the yeast vacuole. Proc Natl Acad Sci USA **93**:12304-12308.

[134] **Shibata, H., Y. Kashiwayama, T. Imanaka and H. Kato.** 2004. Domain architecture and activity of human Pex19p, a chaperone-like protein for intracellular trafficking of peroxisomal membrane proteins. J Biol Chem :.

[135] **Sichting, M., A. Schell-Steven, H. Prokisch, R. Erdmann and H. Rottensteiner.** 2003. Pex7p and Pex20p of Neurospora crassa Function Together in PTS2-dependent Protein Import into Peroxisomes. Mol Biol Cell **14**:810-821.

[136] **Singer, M. S., A. Kahana, A. J. Wolf, L. L. Meisinger, S. E. Peterson, C. Goggin, M. Mahowald and D. E. Gottschling.** 1998. Identification of high-copy disruptors of telomeric silencing in Saccharomyces cerevisiae. Genetics **150**:613-632.

[137] **Smith, J. J., M. Marelli, R. H. Christmas, F. J. Vizeacoumar, D. J. Dilworth, T. Ideker, T. Galitski, K. Dimitrov, R. A. Rachubinski and J. D. Aitchison.** 2002. Transcriptome profiling to identify genes involved in peroxisome assembly and function. J Cell Biol **158**:259-71.

[138] **Snyder, W. B., A. Koller, A. J. Choy and S. Subramani.** 2000. The peroxin Pex19p interacts with multiple, integral membrane proteins at the peroxisomal membrane. J Cell Biol **149**:1171-8.

[139] **Snyder, W. B., K. N. Faber, T. J. Wenzel, A. Koller, G. H. Luers, L. Rangell, G. A. Keller and S. Subramani.** 1999. Pex19p interacts with Pex3p and Pex10p and is essential for peroxisome biogenesis in Pichia pastoris. Mol Biol Cell **10**:1745-61.

[140] **Soukupova, M., C. Sprenger, K. Gorgas, W. H. Kunau and G. Dodt.** 1999. Identification and characterization of the human peroxin PEX3. Eur J Cell Biol **78**:357-74.

[141] **South, S. T., E. Baumgart and S. J. Gould.** 2001. Inactivation of the endoplasmic reticulum protein translocation factor, Sec61p, or its homolog, Ssh1p, does not affect peroxisome biogenesis. Proc Natl Acad Sci U S A **98**:12027-31.

[142] **South, S. T., K. A. Sacksteder, L. Xiaoling, L. Yifei and S. J. Gould.** 2000. Inhibitors of COPI and COPII Do Not Block PEX3-mediated Peroxismome Synthesis. J Cell Biol **149**:1345-1359.

[143] **South, S. T. and S. Gould.** 1999. Peroxisome Synthesis in the Absence of Preexisting Peroxisomes. J Cell Biol **144**:255-266.

[144] **Steel, G. J., J. Brownsword and C. J. Stirling.** 2002. Tail-anchored Protein Insertion into Yeast ER Requires a Novel Posttranslational Mechanism wich is Independent of the SEC Machinery. Biochemistry **41**:11914-20.

[145] **Stein, K., A. Schell-Steven, R. Erdmann and H. Rottensteiner.** 2002. Interactions of Pex7p and Pex18p/Pex21p with the Peroxisomal Docking Machinery: Implications for the First Steps in PTS2 Protein Import. Mol Cell Biol **22**:6056-69.

[146] **Stromhaug, P. E. and K. D. J.** 2001. Approaching the molecular mechanism of autophagy. Traffic **2**:524-532.

[147] **Subramani, S., A. Koller and W. B. Snyder.** 2000. Import of peroxisomal matrix and membrane proteins. Annu Rev Biochem **69**:399-418.

[148] **Subramani, S.** 1998. Components involved in peroxisome import, biogenesis, proliferation, turnover, and movement. Physiol Rev **78**:171-188.

[149] **Sugihara, T., S. C. Kaul, J. Kato, R. R. Reddel, H. Nomura and R. Wadhwa.** 2001. Pex19p dampens the p19ARF-p53-p21WAF1 tumor suppressor pathway. J Biol Chem **276**:18649-52.

[150] **Suzuki, K., T. Kirisako, Y. Kamada, N. Mizushima, T. Noda and Y. Ohsumi.** 2001. The pre-autophagosomal structure organized by concerted functions of APG genes is essential for autophagosome formation. Embo J **20**:5971-81.

[151] **Tabak, H, F., L. Murk, J, I. Braakman and J. Geuze, H.** 2003. Peroxisomes start their life in the endoplasmic reticulum. Traffic **4**:512-8.

[152] **Thumm, M., R. Egner, B. Koch, M. Schlumpberger, M. Straub, M. Veenhuis and D. H. Wolf.** 1994. Isolation of autophagocytosis mutants of Saccharomyces cerevisiae. FEBS Lett **349**:275-80.

[153] **Titorenko, V. I. and R. A. Rachubinski.** 1998. Mutants of the Yeast Yarowia lipolytica Defective in Protein Exit from the Endoplasmatic Reticulum Are Also Defective in Peroxisome Biogenesis. Mol Cell Biol **18**:2789-2803.

[154] **Tsukada M, O. Y.** 1993. Isolation and characterization of autophagy-defective mutants of Saccharomyces cerevisiae. FEBS Lett **333**:.

[155] **Urbanowski, J. L. and R. C. Piper.** 1999. The iron transporter Fth1p forms a complex with the Fet5 iron oxidase and resides on the vacuolar membrane. J Biol Chem **274**:38061-70.

[156] **Urquhart, A. J., D. Kennedy, S. J. Gould and D. I. Crane.** 2000. Interaction of Pex5p, the type 1 peroxisome targeting signal receptor, with the peroxisomal membrane proteins Pex14p and Pex13p. J Biol Chem **275**:4127-36.

[157] **Vizeacoumar, F, J., C. Torres-Guzman, J, D. Bouard, D. Aitchison, J and A. Rachubinski, R.** 2004. Pex30p, Pex31p, and Pex32p form a family of peroxisomal integral membrane proteins regulating peroxisome size and number in Saccharomyces cerevisiae. Mol Biol Cell **15**:665-677.

[158] **Voorn-Brouwer, T., A. Kragt, H. F. Tabak and B. Distel.** 2001. Peroxisomal membrane proteins are properly targeted to peroxisomes in the absence of COPI- and COPII-mediated vesicular transport. J Cell Sci **114**:2199-204.

[159] **Wadhwa, R., T. Sugihara, M. K. Hasan, K. Taira, R. R. Reddel and S. C. Kaul.** 2002. A major functional difference between the mouse and human ARF tumor suppressor proteins. J Biol Chem **277**:36665-70.

[160] **Wendlan, B., S. D. Emr and H. Riezman.** 1998. Protein traffic in the yeast endocytic and vacuolar protein sorting pathways. Curr Opin Cell Biol **10**:513-522.

[161] **Westermann, B. and W. Neupert.** 2000. Mitochondria-targeted green fluorescent proteins: convenient tools for the study of organelle biogenesis in Saccharomyces cerevisiae. Yeast **16**:1421-1427.

[162] **Williams, T. and C. Kelley.** 2001. Gnuplot 4th Berkeley Distribution. www.gnuplot.info

[163] **Yaffe, M. P. and G. Schatz.** 1984. Two nuclear mutations that block mitochondrial protein import in yeast. Proc Natl Acad Sci USA **81**:4819-4823.

[164] **Yeh, E. T. H., L. Gong and T. Kamitani.** 2000. Ubiquitin-like proteins: new wines in new bottles. Gene **248**:1-14.

[165] **Zerial, M.** 1998. Membranes and Sorting. Curr Opin Cell Biol **10**:475-476.