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Abbreviations and acronyms

Aa	amino acid
Ab (mAb / pAb)	antibody (monoclonal / polyclonal)
AMPA	α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid
BDNF	brain-derived neurotrophic factor
BSA	bovine serum albumin
cAMP	cyclic adenosine monophosphate
cDNA	complementary DNA
CNS	central nervous system
Cy	cyanine (dyes)
DAPI	4`, 6 diamidino-2-phenlylindole
DIV	days in vitro
DMSO	dimethyl sulfoxide
DNA	deoxyribonucleic acid
DNQX	6,7-dinitroquinoxaline-2,3-dione
E	embryonic day
EDTA	ethylene diamine tetra actetic acid
EGFP	enhanced green fluorescent protein
EtBr	ethidium bromide
FCS	fetal calf serum
FITC	fluorescein isothiocyanate
GABA	gamma-amino butyric acid
GAPDH	glyceraldehyde-6-phosphate dehydrogenase
GluRs	glutamate receptors
GFP	green fluorescent protein
h	hour (s)
HEPES	N-2-hydroxy-ethylpiperazine-N´-2-ethane sulfonic acid
kD	kilo Dalton
l	liter
IgG	immunoglobulin G
LPA	lysophosphatidic acid
LPP	lipid phosphate phosphatase
M	molar (moles/liter)
MAP kinase	mitogen-associated protein kinase
MAP2	microtubule-associated protein 2
MEM	minimum essential medium

mEPSC/ mIPSC	miniature excitatory/ inhibitory postsynaptic current
min	minute (s)
mg / ml	milligram / milliliter
mRNA	messenger ribonucleic acid
NCAM	neural cell adhesion molecule
NGF	nerve growth factor
NLGN (NL, NLG)	neuroligin
NMDA	N-methyl-D-aspartic acid
ns	not significant
NT	neurotrophin
NT-3 / NT-4	neurotrophic factor-3 / 4
OD	optical density
P	post-natal day
$p75^{NTR}$	pan neurotrophin receptor
PA	phosphatidic acid
PAF	paraformaldehyde
PBS-CMF	phosphate-buffered saline calcium and magnesium free
PCR	polymerase chain reaction
PI3	phosphatidylinositol 3-kinase
PNS	peripheral nervous system
PO	poly-L-ornithine
PRG / LPR	plasticity-related gene / lipid phosphate phosphatase-related protein
PSD	postsynaptic density
ROI	region of interest
RNA	ribonucleic acid
RT-PCR	reverse transcriptase-polymerase chain reaction
S1P	sphingosine-1-phosphate
siRNA	small interference RNA
S-MCPG	(S)-α-methyl-4-carboxyphenylglycine
Syp I / Syn I	synaptophysin I / synapsin I
t-BDNF	transfected BDNF
TE	tris EDTA
Tris	tris (hydroxymethyl) aminomethane
Trk	tropomyosin related kinase
°C	degree celcius
µg / µl / µm / µM	microgram / microliter / micrometer / micromolar
VGAT / VIAAT / VGluT	vesicular GABA / inhibitory amino acid / glutamate transporter

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ERKLÄRUNG

Hiermit versichere ich, dass ich die vorliegende Arbeit selbständig durchgeführt und verfasst habe. Ich habe keine anderen als die angegebenen Hilfsmittel verwendet.
Außerdem versichere ich, dass diese Dissertation an keiner anderen Universität eingereicht wurde, um ein Promotionsverfahren zu eröffen.

Bhumika Singh Berlin, November, 2005