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

Bhumika Singh
Berlin, November, 2005