

Appendix 1 Primary antibodies. Antibody uses are WB – western blot; IHC – immunohistochemistry; IP – immunoprecipitation. Non-commercial suppliers are Seth Grant, Wellcome Trust Sanger Institute, Cambridge, UK; Masahiko Watanabe, Department of Anatomy, Hokkaido University School of Medicine, Sapporo, Japan and Frank Dunn-Moore, School of Biology, University of St Andrews, St Andrews, UK.

Antigen	Supplier	Antibody type	Working dilution or concentration
NR1	S. Grant	sheep	5 µg per IP
NR1	Upstate	mouse monoclonal	1:1000 (WB)
NR1	Chemicon	mouse monoclonal	5 µg/ml (IHC)
NR2A	Upstate	rabbit polyclonal	1:500 (WB), 5 µg/ml (IHC)
NR2B	BD Biosciences	mouse monoclonal	1:250 (WB), 5 µg/ml (IHC)
GluR1	Upstate	rabbit polyclonal	1:670 (WB)
GluR2	Zymed	mouse monoclonal	1:300 (WB)
GluR6/7	Upstate	rabbit polyclonal	1:500 (WB)
Kv1.4	Upstate	mouse monoclonal	1:667 (WB)
ErbB4	Santa Cruz	rabbit polyclonal	1:200 (WB)
SAP102	Synaptic Systems	rabbit polyclonal	1:5000 (WB)
SAP102	M. Watanabe	rabbit polyclonal	5µg/ml (IHC)
PSD-95	BD Biosciences	mouse monoclonal	1:500 (WB)
PSD-95	Zymed	rabbit polyclonal	10 µg/ml (IHC)
PSD-93	Synaptic Systems	rabbit polyclonal	1:1000 (WB)
PSD-93	Watanabe	rabbit polyclonal	4µg/ml (IHC)
SAP97	BD Biosciences	mouse monoclonal	1:1000 (WB)
SynGAP	Upstate	rabbit polyclonal	1:2000 (WB)
Sec8	BD Biosciences	mouse monoclonal	1:1000 (WB)
Pyk2	BD Biosciences	mouse monoclonal	1:1000 (WB)
Kalirin	Upstate	rabbit polyclonal	1:250 (WB)
Stargazin	Calbiochem	rabbit polyclonal	1:200 (WB)
NrCAM	F. Gunn-Moore	rabbit polyclonal	1:1000 (WB)
MAP2B	BD Biosciences	mouse monoclonal	1 µg/ml (IHC)
ERK 1/2	Cell Signaling	mouse monoclonal	1:1000
phospho-p44/42 ERK 1/2 T202/Y204	Cell Signaling	mouse monoclonal	1:1000

Appendix 2 Oligonucleotide sequences. Sequences are listed 5'→3'.

Name	Sequence	Use
P1	GGTCTCTGAT GAAGCAGTGA TTTT	SAP102 ES cell genotyping
P2	TGATGACCCA TAGACAGTAG GATCA	SAP102 ES cell genotyping
P3	CTAAAGCGCA TGCTCCAGAC	SAP102 genotyping
P4	CATGTGATGG CTTTACACCG	SAP102 mouse genotyping
P5	CATAGTCTGC TCTGCCTCCC	SAP102 mouse genotyping
P6	AGGACTCTCT TTGGTGGGCA	PSD-95 mouse genotyping
P7	AACCAAGGCG GATCGTGATC CA	PSD-95 mouse genotyping
P8	TGTGGCCGGC TGGGTGTGG	PSD-95 mouse genotyping
P9	AATCGCGGCC GTCTATCTCA T	PSD-95 mouse genotyping
5'PDZfwd	ACAAGCCTTC TTGCTCCAAA	BAC library screen
5'PDZrev	GACTCACTGG AGAGGGCAAG	BAC library screen
5'PDZ2fwd	GGTCTCTGAT GAAGCAGTGA TTTT	BAC library screen
5'PDZ2rev	TGATGACCCA TAGACAGTAG GATCA	BAC library screen
3'PDZfwd	TTGATGCAAG ACAGGAGTGC	BAC library screen
3'PDZrev	CCACCAGGCA AATTCTCAGT	BAC library screen
SAP5'probefwd	AAGGCATGGA ATGTGGTAGC	5' probe, southern blot
SAP5'proberev	TTACCCGGTG TAAAGCCATC	5' probe, southern blot
SAP3'probefwd	TGCCTAGCAC AGGTGCTTTA	3' probe, southern blot
SAP3'proberev	CTGGAGTTGT TGGTGGGACT	3' probe, southern blot
SAP5'PDZ3fwd	CTTGCCCTCT CCAGTGAGTC	internal probe, southern blot
SAP5'PDZ3rev	GAAGTGGCCA GGAGTCTGAG	internal probe, southern blot
L1sense	GCGGCCGCTA TATATATAGG CGCGCCGGAT CCTGATCAAG ATCTGGATCC GTTTAAACTT AATTAATATA TATATATAGT CGAC	linker, pIRESlacZneoflox construction
L1antisense	GTCGACTATA TATATATATT AATTAAGTTT AAACGGATCC AGATCTTGAT CAGGATCCGG CGGCCTATA TATATAGCGG CCGCACGTC	linker, pIRESlacZneoflox construction
L2sense	GCTTAAGAAT ATTTTTAAAG GATCCGCTAG CAATATTCTT AAGG	Linker, targeting vector construction
L2antisense	AATTCCCTTA AGAATATTGC TAGCGGATCC TTAAAAATA TTCTTAAGCT GCA	Linker, targeting vector construction
AAC+SV40fwd	AACGATCCGC ATCTCAATTA GTC	SV40 polyA signal PCR
AAC+SV40rev	ATCGATCCAG ACATGATAAG ATA	SV40 polyA signal PCR
SAP1A	TCGTTACAAA GTCTGAGGTG CAAACAAAAG TCTCTATCAA GGCAGTACTA AAGGTACCT CCATTCTACC AAACGTCGTG ACTGGGAAAA C	BAC excision I
SAP1B	TCCTCCATTC CTTGGAATAC ATAAAGAGGG ACAAGCATTG GAAGTTGCTT CCCAGTTCT CTCCCTTGAG CGCGGCCGCTT CGACTCTAGT GGATCTGC	BAC excision I
SAP2A	AAATGACTGT GCCCTTCCAC CCCCTTTCAG GGCAACTCTG GCCTTGGCTT CAGTATCGCA GAGCAGAAGC TGATCAGCGA GGAGGACCTG TGATTTAAAC TGATCCCGGG CCGTCTA	lacZ insertion I
SAP2B	CTCCCGTTCT TCTTGCACTA CTAGAGCACC TGTTAGCACC AGGTTCTCC TCCACAGAGC TTACAGGCCT GCAGGGCCTG AAGCTTAATA CGCAAACCGC CTCTC	lacZ insertion I
aa1fwd	CCGGGGTACC GGGGGTTGTA TGTGGTGTGT	BAC excision II
aa1rev	AATTGGCGCG CCCCCTCAG AGAAGACCCT GC	BAC excision II
aa2fwd	AATTGGCGCG CCAGCAGCCG TTCATTATTT GG	BAC excision II
aa2rev	CAGCTTGTTT AAACGCATGC TCAAGGGAGA GAAC	BAC excision II
SAP2Afwd	ATAAGAATGC GGCCGCTCCT ATGGATGTTG GGTGTG	lacZ insertion II
SAP2Arev	TTGGCGCGCC TTAAATCAC AGGTCCTCCT CGCTGATCAG CTTCTGCTCA CCTGCGATAC TGAAGCCAA	lacZ insertion II
SAP2Bfwd	TAAGCTTTGT TAAACAAGC TTTGTAATCC TGGCCTTTGT CC	lacZ insertion II
SAP2Brev	TATGCCTTAA TTAACCACTG AGAGAGCAGG AACC	lacZ insertion II
SAP5'neofloxfwd	TATACTCGAG GACAGGATGG AGATGAGGGA	neoflox insertion

SAP5'neofloxrev	TATATCTAGA GCTAGCTCCC TTCCATTAC CTATGG	neoflox insertion
SAP3'neofloxwd	TATAGGTACC ATGCATGATA TCGAATTCCC AGTCCCAGAT CCTAGCCT	neoflox insertion
SAP3'neofloxrev	TATAAGATCT GCCAAAATGC CTTATCCTGA	neoflox insertion
SAP5'loxPneoflrfwd	TATATAGCGG CCGCGGGAGG CAGAGCAGAC TATG	loxPneoflrfwd insertion
SAP5'loxPneoflrtrev	TATAGGCGCG CCTCCTTCAAAG GTCCCAGAAA	loxPneoflrfwd insertion
SAP3'loxPneoflrfwd	TATAGTTTAA ACAAGCTTTA AATTACCACT GGCCTTGAAA CC	loxPneoflrfwd insertion
SAP3'loxPneoflrtrev	TATATAGTCG ACACATCCCTCC CCTTGATCC	loxPneoflrfwd insertion

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