#12218 Store at -20°C

SHANK2 Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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New 09/12

For Research Use Only. Not For Use In Diagnostic Procedures.

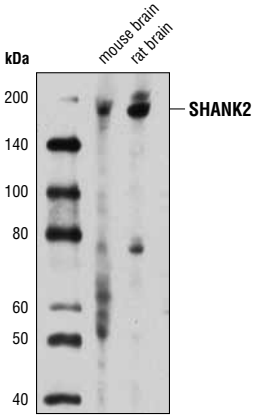
Entrez-Gene ID #22941
Swiss-Prot Acc. #Q9UPX8

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	M, R, (H, Mk, B)	165 kDa	Rabbit**

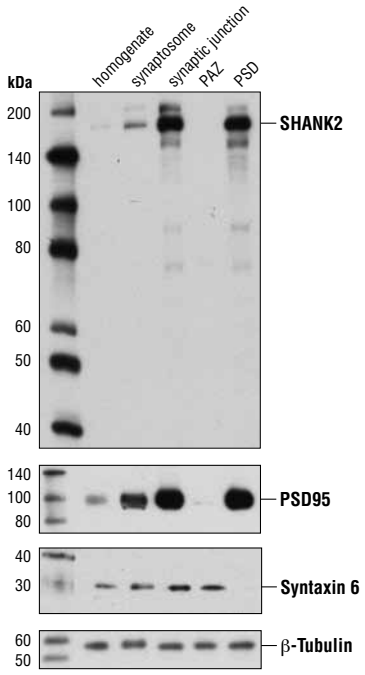
Background: The SHANK family proteins, also known as proline-rich synapse-associated proteins, consist of SHANK1, SHANK2, and SHANK3. SHANK proteins act as scaffolds at the neuronal post-synaptic density (PSD) (1), where they play a critical role in PSD assembly of excitatory synapses during development (2). While recruitment of SHANK proteins to the synapse is independent of their interaction with Homer (3), proper synaptic targeting of SHANK1 is mediated by interactions between its PDZ domain and PSD proteins (4). At the synapse, SHANK proteins interact with NMDA receptors and metabotropic glutamate receptor complexes (5). Research studies have proposed the involvement of SHANK proteins in autism and neurodegenerative diseases (6).

Specificity/Sensitivity: SHANK2 Antibody recognizes endogenous levels of total SHANK2 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val537 of human SHANK2 protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from mouse and rat brain tissue using SHANK2 Antibody.



Western blot analysis of extracts from the indicated rat brain synaptic fractions using SHANK2 Antibody. Separation of the different synaptic fractions was confirmed using PSD95 (D27E11) XP® Rabbit mAb #3450 and Syntaxin 6 (C34B2) Rabbit mAb #2869. Equal loading of each fraction was assessed using β-Tubulin (9F3) Rabbit mAb #2128. Fractionation of the different synaptic compartments was carried out as described by Phillips, G.R. et al. (2001) Neuron 32, 63-77. PAZ, Pre-synaptic active zone.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

(1) Grabrucker, A.M. et al. (2011) *Trends Cell Biol* 21, 594-603.
(2) Boeckers, T.M. et al. (1999) *J Neurosci* 19, 6506-18.
(3) Boeckers, T.M. et al. (2005) *J Neurochem* 92, 519-24.
(4) Sala, C. et al. (2001) *Neuron* 31, 115-30.
(5) Boeckers, T.M. et al. (2002) *J Neurochem* 81, 903-10.
(6) Grabrucker, A.M. et al. (2011) *Trends Cell Biol* 21, 594-603.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.