abcam

Product datasheet

Anti-SHANK2 antibody [N23B/49] ab94575

1 References 2 Images

Overview

Product name	Anti-SHANK2 antibody [N23B/49]
Description	Mouse monoclonal [N23B/49] to SHANK2
Host species	Mouse
Specificity	Recognizes SHANK1, SHANK2, SHANK3.
Tested applications	**Suitable for:** WB, ICC/IF
Species reactivity	**Reacts with:** Rat, Human
Immunogen	Fusion protein corresponding to Rat SHANK2 aa 50-350. Database link: **Q9QX74**
Positive control	Rat brain lysate
General notes	The clone number has been updated from S23B-49 to N23B/49, both clone numbers name the same antibody clone. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 50% Glycerol, PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	N23B/49
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab94575 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		
ICC/IF		

Application notes

ICC: Use at a concentration of 0.1 - 1 µg/ml.
ICC/IF: Use at a concentration of 1 - 10 µg/ml.
IHC-P: Use at a concentration of 0.1 - 1 µg/ml.
IHC-Fr: Use at a concentration of 0.1 - 1 µg/ml.
WB: Use at a concentration of 1 - 10 µg/ml. Predicted molecular weight: 159 kDa.

Not yet tested in other applications.
Optimal dilutions/concentrations should be determined by the end user.

Target

Function

Seems to be an adapter protein in the postsynaptic density (PSD) of excitatory synapses that interconnects receptors of the postsynaptic membrane including NMDA-type and metabotropic glutamate receptors, and the actin-based cytoskeleton. May play a role in the structural and functional organization of the dendritic spine and synaptic junction.

Tissue specificity

Expressed in epithelial cells (at protein level). All isoforms except isoform 7 are expressed predominantly in brain, with highest levels in olfactory bulb, cerebral cortex, cerebellum, central gray matter and hippocampus. Moderate levels of expression are seen in the caudate putamen, thalamic nuclei and brain stem. In cerebellum primarily expressed in Purkinje cells. Isoform 7 is not expressed in brain but expressed in liver, cholangiocytes and thymus. Isoform 7 is present in pancreas, colonic mucosa and thymocytes (at protein level).

Sequence similarities

Belongs to the SHANK family.
Contains 1 PDZ (DHR) domain.
Contains 1 SAM (sterile alpha motif) domain.
Contains 1 SH3 domain.

Developmental stage

Expressed during early postnatal brain development, especially in the caudate putamen and thalamic nuclei. Expression in the cerebral cortex, the hippocampus and the cerebellum is moderate to high at P5 and shows a stable expression throughout development. Isoforms 1, 2, 4 and 6 are predominantly expressed in cerebellum up to the age of approximately 3 weeks. Isoform 1 expression decreases during development of cortex but slightly increases in cerebellum.

Domain

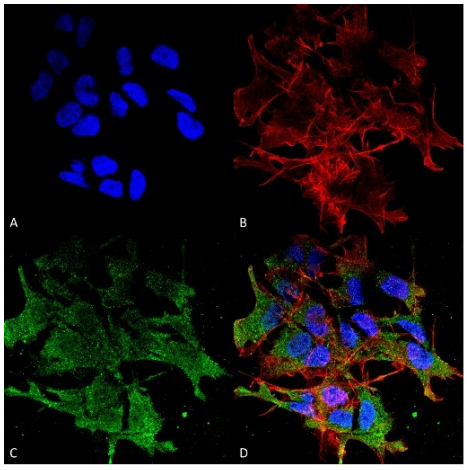
The PDZ domain is required for interaction with GRID2, PLCB3, SLC9A3 and CFTR.

Cellular localization

Apical cell membrane. Cytoplasm. Cell junction, synapse. Cell junction, synapse, postsynaptic cell membrane, postsynaptic density. Cell projection, growth cone. Cell projection, dendritic spine. Colocalizes with cortactin in growth cones in differentiating hippocampal neurons. Present in the dendritic spines of cerebellar Purkinje cells (By similarity). Colocalizes with cortactin in growth cones in differentiating hippocampal neurons. Colocalized with PDE4D to the apical membrane

of colonic crypt cells.

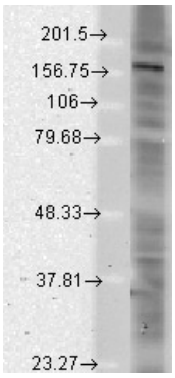
Images



Immunocytochemistry/ Immunofluorescence - Anti-SHANK2 antibody [N23B/49] (ab94575)

4% formaldehyde-fixed (for 15 minutes at room temperature) SK-N-BE (Human neuroblastoma cells) labeling SHANK2 using ab94575 at 1/100 dilution (for 60 minutes at room temperature). Goat Anti-Mouse ATTO 488 was used as the secondary at 1/200 dilution for 60 minutes at room temperature. Localization in the sytplasm is observed.

Counterstains: Phalloidin Texas Red F-Actin stain (Red). DAPI nuclear stain (Blue).



Western blot - Anti-SHANK2 antibody [N23B/49] (ab94575)

Western blot detection of SHANK2 in Rat braim membrane lysates using ab94575 at 1:1000 dilution.

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