

### Anti-SHANK1 antibody [N22/21] ab94576

[3 References](#) [3 Images](#)

#### Overview

<b>Product name</b>	Anti-SHANK1 antibody [N22/21]
<b>Description</b>	Mouse monoclonal [N22/21] to SHANK1
<b>Host species</b>	Mouse
<b>Specificity</b>	ab94576 does not react with SHANK2 and SHANK3
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Fusion protein corresponding to Rat SHANK1 aa 450-700. Database link: <a href="#">Q9WV48</a>
<b>Positive control</b>	Rat brain lysate
<b>General notes</b>	<p>The clone number has been updated from S22-21 to N22/21, both clone numbers name the same antibody clone.</p> <p>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.</p> <p>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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	Preservative: 0.09% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), PBS
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	N22/21
<b>Isotype</b>	IgG1

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab94576 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
IHC-P		Use at an assay dependent concentration.
WB		Use a concentration of 1 - 10 µg/ml. Predicted molecular weight: 225 kDa.
Flow Cyt		Use 1µg for 10 <sup>6</sup> cells. <b>ab170190</b> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

## 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 via complexes with GKAP/PSD-95 and Homer, respectively, and the actin-based cytoskeleton. Plays a role in the structural and functional organization of the dendritic spine and synaptic junction.

### Tissue specificity

Expressed in brain particularly in the amygdala, hippocampus, substantia nigra and thalamus. Isoform 2 seems to be expressed ubiquitously.

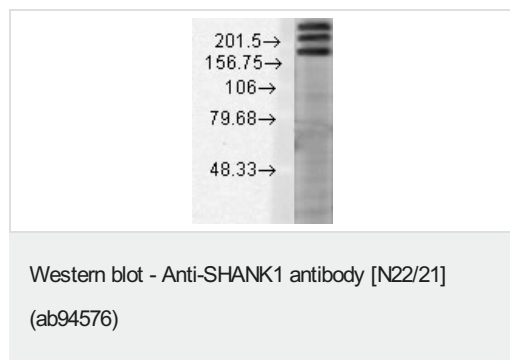
### Sequence similarities

Belongs to the SHANK family.  
Contains 6 ANK repeats.  
Contains 1 PDZ (DHR) domain.  
Contains 1 SAM (sterile alpha motif) domain.  
Contains 1 SH3 domain.

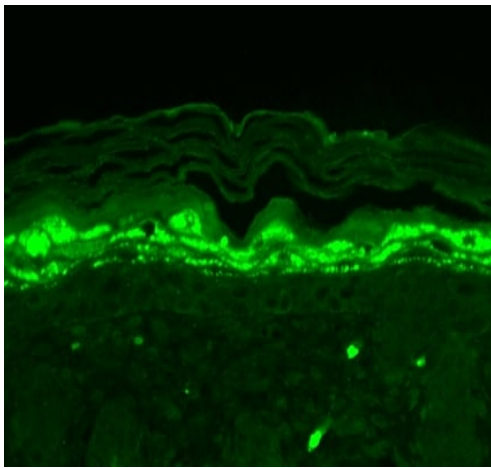
### Cellular localization

Cytoplasm. Cell junction > synapse > postsynaptic cell membrane > postsynaptic density. Cell junction > synapse. Postsynaptic density of neuronal cells.

## Images

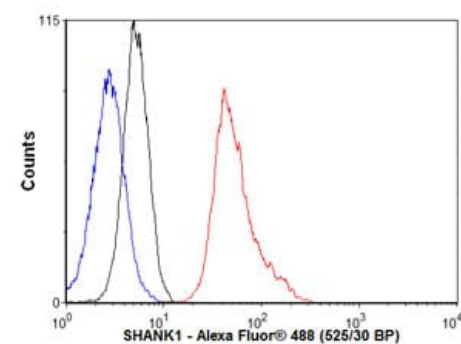


Western blot detection of Shank1 in Rat brain membrane lysates using ab94576 at 1:1000 dilution.



Immunohistochemistry paraffin embedded sections -  
Anti-SHANK1 antibody [N22/21] (ab94576)

paraffin-embedded, bouin's-fixed mouse backskin stained for SHANK1 using ab94576 at 1/100 dilution in immunohistochemical analysis. FITC Goat Anti-Mouse (green) at 1/50 dilution was used as the secondary antibody. Filaggrinlike staining (upper layer aggregations of staining) is observed.



Flow Cytometry - Anti-SHANK1 antibody [N22/21]  
(ab94576)

Overlay histogram showing SH-SH5Y cells stained with ab94576 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab94576, 1µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) (**ab150113**) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 1µg/1x10<sup>6</sup> cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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