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Anti-SHANK3 Antibody
Catalog # ABO12785

Specification

Anti-SHANK3 Antibody - Product Information

Application	**WB**
Primary Accession	Q9BYB0
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for SH3 and multiple ankyrin repeat domains protein 3(SHANK3) detection. Tested with WB in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-SHANK3 Antibody - Additional Information

Gene ID 85358

Other Names
SH3 and multiple ankyrin repeat domains protein 3, Shank3, Proline-rich synapse-associated protein 2, ProSAP2, SHANK3, KIAA1650, PROSAP2, PSAP2

Calculated MW
184667 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human

Subcellular Localization
Cytoplasm . Cell junction, synapse, postsynaptic cell membrane, postsynaptic density . Cell projection, dendritic spine . In neuronal cells, extends into the region subjacent to the postsynaptic density (PSD). .

Tissue Specificity
Expressed in the cerebral cortex and the cerebellum.

Protein Name
SH3 and multiple ankyrin repeat domains protein 3

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human SHANK3 (1670-1710aa KFDVGDWLESIHLGEHRDRFEDHEIEGAHLPALTKDDFV EL), different from the related

mouse and rat sequences by one amino acid.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-SHANK3 Antibody - Protein Information

Name SHANK3

Synonyms KIAA1650, PROSAP2, PSAP2

Function
Major scaffold postsynaptic density protein which interacts with multiple proteins and complexes to orchestrate the dendritic spine and synapse formation, maturation and maintenance. 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 through the interaction with Arp2/3 and WAVE1 complex as well as the promotion of the F-actin clusters. By way of this control of actin dynamics, participates in the regulation of developing neurons growth cone motility and the NMDA receptor-signaling. Also modulates GRIA1 exocytosis and GRM5/MGLUR5 expression and signaling to control the AMPA and metabotropic glutamate receptor-mediated synaptic transmission and plasticity. May be required at an early stage of synapse formation and be inhibited by IGF1 to promote synapse maturation.

Cellular Location
Cytoplasm. Postsynaptic density. Cell projection, dendritic spine. Note=In neuronal cells, extends into the region subjacent to the postsynaptic density (PSD).

Tissue Location
Expressed in the cerebral cortex and the cerebellum

Anti-SHANK3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-SHANK3 Antibody - Images

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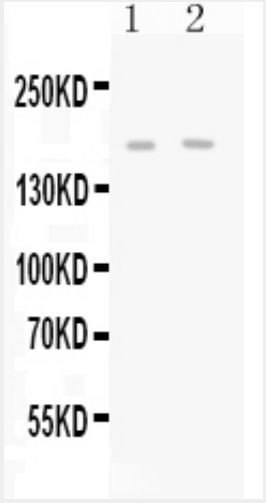

Western blot analysis of SHANK3 expression in rat brain extract (lane 1) and mouse brain extract (lane 2). SHANK3 at 185KD was detected using rabbit anti- SHANK3 Antigen Affinity purified polyclonal antibody (Catalog # ABO12785) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

Anti-SHANK3 Antibody - Background

SH3 and multiple ankyrin repeat domains 3 (Shank3), also known as proline-rich synapse-associated protein 2 (ProSAP2), is a protein that in humans is encoded by the SHANK3 gene. This gene is a member of the Shank gene family. Shank proteins are multidomain scaffold proteins of the postsynaptic density that connect neurotransmitter receptors, ion channels, and other membrane proteins to the actin cytoskeleton and G-protein-coupled signaling pathways. Additionally, Shank proteins play a role in synapse formation and dendritic spine maturation. Mutations in this gene are a cause of autism spectrum disorder (ASD), which is characterized by impairments in social interaction and communication, and restricted behavioral patterns and interests. Mutations in this gene also cause schizophrenia type 15, and are a major causative factor in the neurological symptoms of 22q13.3 deletion syndrome, which is also known as Phelan-McDermid syndrome. Additional isoforms have been described for this gene but they have not yet been experimentally verified.