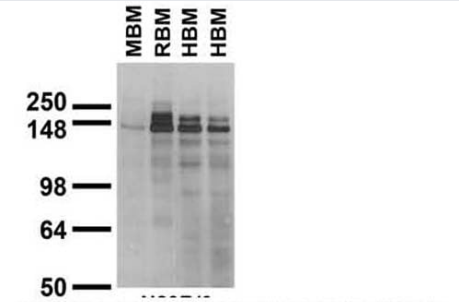
# SHANK2 Antibody – Mouse Monoclonal

## PRODUCT OVERVIEW

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| **Product Name** | Shank2, Monoclonal Antibody |
| **Full Product Name** | Anti-Shank2 Monoclonal Antibody |
| **Product Gene Name** | anti-SHANK2 antibody |
| **Clonality** | Monoclonal |
| **Isotype** | IgG1 |
| **Clone Number** | S23b-6 |
| **Host** | Mouse |
| **Species Reactivity** | Human, mouse, rat |
| **Form/Format** | 100ug in PBS, pH 7.4; 50% glycerol, 0.09% sodium azide. Purified by Protein G affinity chromatography. |
| **Specificity** | Shank2<br>This antibody recognizes human, mouse (weak), and rat Shank2. It does not crossreact with Shank1 or Shank3. |
| **Preparation and Storage** | This antibody is stable for at least one (1) year at -20 degree C. Avoid repeated freezing and thawing. |
| **Molecular Weight** | 26,911 Da |
| **Immunogen Sequence Positions** | 84-309 |
| **Chromosome Location** | Chromosome: 11; NC_000011.9 (70313961..70935808, complement). Location: 11q13.2 |
| **3D Structure** | ModBase 3D Structure for Q24JS4 |
| **Antigen** | Fusion protein corresponding to aa 84-309 (SH3/PDZ domains) of rat Shank2 (accession no. Q9QX74). This sequence is 94% homologous with human and 97% homologous with mouse Shank2. |
| **Dilution Instructions** | Dilute in PBS or medium which is identical to that used in the assay system. |
| **Applications Tested/Suitable for anti-SHANK2 antibody** | Immunoblot; Immunohistochemistry; Immunocytochemistry; Immunofluorescence |
| **Application Notes for anti-SHANK2 antibody** | Immunoblotting: use at 1-10ug/ml. A band of ~160kDa is detected. Immunohistochemistry and Immunocytochemistry: use at 0.1-1ug/ml. Immunofluorescence: use at 1-10ug/ml. These are recommended concentrations. User should determine optimal concentrations for their application. Positive control: Adult rat brain lysate. |
| **Related Product Information for anti-SHANK2 antibody** | Shank proteins are a family of scaffold proteins identified through their interaction with a variety of membrane and cytoplasmic proteins. Shank proteins at postsynaptic sites of excitatory synapses play roles in signal transmission into the postsynaptic neuron. Shank proteins are crucial in receptor tyrosine kinase signaling. Shank2 is expressed in neurons of the developing retina and could play a role in neuronal differentiation of the developing retina. Recent studies suggest that disruption of glutamate receptors at the Shank-postsynaptic platform could contribute to the destruction of post-synaptic density which underlies synaptic dysfunction and loss in Alzheimer's disease. |
| **Other Notes** | Small volumes of anti-SHANK2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for SHANK2 purchase** | MBS190606 is an antibody targeting SHANK2. Also known as Anti-Shank2 Monoclonal Antibody. Reactive in Human, mouse, rat. Host: Mouse. |



Brain membranes from whole rat (RBM) and mouse (MBM) brain and from human (HBM) cerebral cortex and hippocampus.

**Testing Data of anti-SHANK2 antibody**

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SHANK2. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 254911082 |
| **NCBI GeneID** | 22941 |
| **NCBI Accession #** | NP_573573.2 |
| **UniProt Primary Accession #** | Q24JS4 |
| **UniProt Related Accession #** | Q24JS4; Q9UPX8 |
| **GenBank Nucleotide #** | NM_133266.3 |
| **NCBI Official Full Name** | SH3 and multiple ankyrin repeat domains protein 2 isoform 2 |
| **NCBI Official Synonym Full Names** | SH3 and multiple ankyrin repeat domains 2 |
| **NCBI Official Symbol** | SHANK2 |
| **NCBI Official Synonym Symbols** | SHANK; AUTS17; CORTBP1; CTTNBP1; ProSAP1; SPANK-3 |
| **UniProt Protein Name** | SHANK2 protein |
| **Protein Family** | SH3 and multiple ankyrin repeat domains protein |
| **UniProt Gene Name** | SHANK2 |
| **UniProt Entry Name** | Q24JS4_HUMAN |
| **NCBI Protein Information** | SH3 and multiple ankyrin repeat domains protein 2; OTTHUMP00000165931; OTTHUMP00000165995; OTTHUMP00000165996; OTTHUMP00000166023; OTTHUMP00000166026; OTTHUMP00000202300; cortactin-binding protein 1; GKAP/SAPAP interacting protein; cortactin SH3 domain-binding protein; proline-rich synapse associated protein 1; proline-rich synapse-associated protein 1 |
| **NCBI Summary for SHANK2** | This gene encodes a protein that is a member of the Shank family of synaptic proteins that may function as molecular scaffolds in the postsynaptic density (PSD). Shank proteins contain multiple domains for protein-protein interaction, including ankyrin repeats, an SH3 domain, a PSD-95/Dlg/ZO-1 domain, a sterile alpha motif domain, and a proline-rich region. This particular family member contains a PDZ domain, a consensus sequence for cortactin SH3 domain-binding peptides and a sterile alpha motif. The alternative splicing demonstrated in Shank genes has been suggested as a mechanism for regulating the molecular structure of Shank and the spectrum of Shank-interacting proteins in the PSDs of adult and developing brain. Two alternative splice variants, encoding distinct isoforms, are reported. Additional splice variants exist but their full-length nature has not been determined. [provided by RefSeq] |

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| **UniProt Comments for SHANK2** | SHANK2: 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. Defects in SHANK2 are a cause of susceptibility to autism type 17 (AUTS17). Autism is a complex multifactorial, pervasive developmental disorder characterized by impairments in reciprocal social interaction and communication, restricted and stereotyped patterns of interests and activities, and the presence of developmental abnormalities by 3 years of age. Most individuals with autism also manifest moderate mental retardation. Belongs to the SHANK family. 4 isoforms of the human protein are produced by alternative splicing.<br><br>Protein type: Adaptor/scaffold<br><br>Chromosomal Location of Human Ortholog: 11q13.2<br><br>Cellular Component: neuron projection; photoreceptor inner segment; brush border membrane; postsynaptic density; dendritic spine; postsynaptic membrane; growth cone; photoreceptor outer segment; cell soma; apical plasma membrane; neurofilament; plasma membrane; ionotropic glutamate receptor complex; cell junction<br><br>Molecular Function: ionotropic glutamate receptor binding; protein binding; GKAP/Homer scaffold activity; SH3 domain binding<br><br>Biological Process: synaptogenesis; adult behavior; social behavior; learning; memory |
| **Research Articles on SHANK2** | **1.** Observational study and genome-wide association study of gene-disease association. (HuGE Navigator) |
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