SH3 and Multiple Ankyrin Repeat Domains Protein 3 (SHANK3) Mouse Recombinant Protein

PRODUCT OVERVIEW

Product Name	SH3 and multiple ankyrin repeat domains protein 3 (Shank3), Recombinant Protein
Full Product Name	Recombinant Mouse SH3 and multiple ankyrin repeat domains protein 3 (Shank3) , partial
Product Gene Name	Shank3 recombinant protein
Product Synonym Gene Name	Shank3
Sequence	DTRHETREDR TKRLFRHYTV GSYDSLTSHS DYVIDDKVAI LQKRDHEGFG FVLRGAKAET PIEEFTPTPA FPALQYLESV DVEGVAWRAG LRTGDFLIEV NGVNVVKVGH KQVVGLIRQG GNRLVMKVVS VTR
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	88,196 Da
Sequence Positions	533-665aa; Partial
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q4ACU6
Species	Mouse
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Shank3 recombinant protein	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. Shank proteins also 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 are a major causitive factor in the neurological symptoms of 22q13.3 deletion syndrome. Additional isoforms have been described for this gene but they have not yet been experimentally verified.
Other Notes	Small volumes of Shank3 recombinant protein 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 Shank3 purchase	MBS1387414 is a recombinant protein targeting Shank3. Also known as Recombinant Mouse SH3 and multiple ankyrin repeat domains protein 3 (Shank3) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Shank3. It may not necessarily be applicable to this product.

NCBI GI #	71896543

NCBI GeneID	58234
NCBI Accession #	NP_067398.2
UniProt Primary Accession #	Q4ACU6
UniProt Secondary Accession #	Q69ZD8; Q9JJZ3; F8S0X0; F8S0X2; F8S0X3; F8S0X5; F8S0X6; S6BMD3; S6CCV8
UniProt Related Accession #	Q4ACU6
GenBank Nucleotide #	NM_021423.3
NCBI Official Full Name	SH3 and multiple ankyrin repeat domains protein 3
NCBI Official Synonym Full Names	SH3 and multiple ankyrin repeat domains 3
NCBI Official Symbol	Shank3
NCBI Official Synonym Symbols	Shank3b; AI841104; SHANK3c-3; SHANK3c-4
UniProt Protein Name	SH3 and multiple ankyrin repeat domains protein 3
UniProt Synonym Protein Names	Proline-rich synapse-associated protein 2; ProSAP2; SPANK-2
Protein Family	SH3 and multiple ankyrin repeat domains protein
UniProt Gene Name	Shank3
UniProt Synonym Gene Names	Kiaa1650; Prosap2; Shank3; ProSAP2
NCBI Protein Information	SH3 and multiple ankyrin repeat domains protein 3
UniProt Comments for Shank3	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.
Research Articles on Shank3	**1.** In a Shank3 Deltaex(4-9) mouse model the excitatory synaptic transmission within the ventral tegmental area is not affected.
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