SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-SHANK1 antibody

SL0211R

Product Name	SHANK1
Chinese Name	富含脯氨酸突触相关蛋白 SHANK1 抗体
Alias	GKAP/SAPAP interacting protein; SH3 and multiple ankyrin repeat domains 1; SH3 and multiple ankyrin repeat domains protein 1; SHANK-1; SPANK 1; Somatostatin receptor interacting protein; Somatostatin receptor-interacting protein; SH3 and multiple ankyrin repeat domains protein 1; SSTR-interacting protein; SPANK1; SSTR interacting protein; SSTRIP; SHAN1_HUMAN; Synamon.
Research Area	Neurobiology Signal transduction
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted: Human, Mouse, Rat,)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	225kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Shank1: 101-200/2161
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic

or diagnostic applications.

PubMed

PubMed

Product Detail

The mechanisms underlying the molecular assemblage of molecules at the synapse are not well understood. Recently, a number of novel anchoring/scaffold proteins that are associated with postsynaptic density (PSD) proteins have been isolated. SHANK1, SHANK2 and SHANK3 constitute a family of proteins that may function as molecular scaffolds in the PSD. SHANK is made of five domain/regions that are probably involved in protein-protein interactions: ankyrin repeats, an SH3 domain, a PDZ domain, a SAM domain, and a proline rich region. SHANK interacts directly with GKAP or SAPAP via its PDZ domain, thus potentially bridging the N-methyl-D-aspartate receptor (NMDA)-PSD-95-GKAP complex.

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.

Subunit:
May homomultimerize via its SAM domain (By similarity). Interacts with the C-terminus of SSTR2 via the PDZ domain. Interacts with IGSF9, SHARPIN, SPTAN1, HOMER1 and DLGAP1/GKAP isoforms 1 and 2 (By similarity). Part of a complex with DLG4/PSD-95 and DLGAP1/GKAP (By similarity). Interacts with BAIAP2.

Subcellular Location:
May homomultimerize via its SAM domain (By similarity). Interacts with the C-terminus of SSTR2 via the PDZ domain. Interacts with IGSF9, SHARPIN, SPTAN1, HOMER1 and DLGAP1/GKAP isoforms 1 and 2 (By similarity). Part of a complex with DLG4/PSD-95 and DLGAP1/GKAP (By similarity). Interacts with BAIAP2.

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

Similarity:
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.

SWISS:
Q9Y566

Gene ID:
50944

Database links:

Entrez Gene: 50944 Human

Entrez Gene: 243961 Mouse

Entrez Gene: 78957 Rat

Omim: 604999 Human

SwissProt: Q9Y566 Human

SwissProt: D3YZU1 Mouse

SwissProt: Q9WV48 Rat

Unigene: 274255 Human

Unigene: 360368 Mouse

Unigene: 225968 Rat

有学者认为：shank-1 似乎是具有兴奋性突触 PSD 中的连接蛋白，它可以连接后突触膜受体，包括 NMDA-Type 和谷氨酸受体等。在树突旋转和突触连接的有机体功能和结构方面起重要作用。shank1 主要表达在脑组织内，属于 shank 家族。