



Rabbit Anti-SAP97 antibody

SL11361R

Product Name:	SAP97
Chinese Name:	突触相关蛋白97抗体
Alias:	Discs large homolog 1; Disks large homolog 1; DLG 1; DLG1; DLG1_HUMAN; DLGH 1; DLGH1; HDLG; Presynaptic protein SAP97; SAP 97; SAP-97; SAP97; Synapse associated protein 97; Synapse-associated protein 97
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	100kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human SAP97:801-904/904
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The discs large (dlg) tumor suppressor gene was first identified in Drosophila through genetic analysis of germline mutations. Several mammalian homologs were subsequently identified and categorized into a protein family designated MAGUK (membrane-associated guanylate kinase homolog). The mammalian homolog of dlg, SAP 97, is also known as hdlg-1 (human) and NE-dlg (neuronal and endocrine). The rat

synaptic protein SAP 90 (also designated PSD-95) also shares homology with these proteins. MAGUKs are localized at the membrane-cytoskeleton interface and contain several distinct domains which suggest a role for these proteins in intracellular signal transduction. Interaction of hdlg-1 and NE-dlg with the tumor suppressor protein APC suggest that MAGUK proteins may also play a role in regulation of growth.

Function:

Essential multidomain scaffolding protein required for normal development. Recruits channels, receptors and signaling molecules to discrete plasma membrane domains in polarized cells. May play a role in adherens junction assembly, signal transduction, cell proliferation, synaptogenesis and lymphocyte activation. Regulates the excitability of cardiac myocytes by modulating the functional expression of Kv4 channels. Functional regulator of Kv1.5 channel.

Subunit:

Homotetramer (Probable). Interacts through its guanylate kinase-like domain with DLGAP1, DLGAP2, DLGAP3, DLGAP4 and MAP1A. May interact with HTR2A. Interacts with LRFN1 (By similarity). Interacts through its PDZ domains with GRIN2A, KCNA1, KCNA2, KCNA3, KCNA4, KCNA5, KCND2, KCND3, GRIA1, GPR124 and GPR125. Interacts with KCNF1. Interacts with CAMK2. Interacts with cytoskeleton-associated proteins EPB41 and EZR. Found in a complex with KCNA5 and CAV3. Found in a complex with APC and CTNNB1. Interacts with CDH1 through binding to PIK3R1. Forms multiprotein complexes with CASK, LIN7A, LIN7B, LIN7C, APBA1, and KCNJ12. Interacts through its guanylate kinase-like domain with KIF13B. Forms a tripartite complex composed of DLG1, MPP7 and LIN7 (LIN7A or LIN7C). May interact with TJAP1. Interacts with TOPK and the HTLV-1 viral Tax and HPV-18 E6 papillomavirus (HPV) oncoproteins. Interacts with PTEN. Interacts with FRMPD4 (via C-terminus). Interacts with LRFN1, LRFN2, LRFN4 and SFPQ.

Subcellular Location:

Membrane; Peripheral membrane protein. Basolateral cell membrane. Endoplasmic reticulum membrane. Cell junction, synapse, postsynaptic cell membrane, postsynaptic density. Cell junction, synapse. Cell membrane, sarcolemma. Note=Colocalizes with EPB41 at regions of intercellular contacts. Basolateral in epithelial cells. May also associate with endoplasmic reticulum membranes. Mainly found in neurons soma, moderately found at postsynaptic densities.

Tissue Specificity:

Abundantly expressed in atrial myocardium (at protein level). Expressed in lung fibroblasts, cervical epithelial and B-cells (at protein level). Widely expressed, with isoforms displaying different expression profiles.

Post-translational modifications:

Phosphorylated by MAPK12. Phosphorylation of Ser-232 regulates association with GRIN2A. Isoform 2 is phosphorylated on Ser-698. Isoform 3 is phosphorylated on Ser-665.

Similarity:

Belongs to the MAGUK family.
Contains 1 guanylate kinase-like domain.
Contains 1 L27 domain.
Contains 3 PDZ (DHR) domains.
Contains 1 SH3 domain.

SWISS:

Q12959

Gene ID:

1739

Database links:

[Entrez Gene: 1739](#) Human

[Entrez Gene: 13383](#) Mouse

[Entrez Gene: 25252](#) Rat

[Omid: 601014](#) Human

[SwissProt: Q12959](#) Human

[SwissProt: Q811D0](#) Mouse

[SwissProt: Q62696](#) Rat

[Unigene: 292549](#) Human

[Unigene: 382](#) Mouse

[Unigene: 89331](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.