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Rabbit Anti-PSD95 antibody

SL0179R

Product Name	PSD95
Chinese Name	突触后密度蛋白 95 抗体
Alias	Discs large homolog 4; Disks large homolog 4; DLG 4; DLG4; DLG4_HUMAN; FLJ97752; FLJ98574; Human post synaptic density protein 95; Human post-synaptic density protein 95; Post synaptic density protein 95; Postsynaptic density protein 95; PSD 95; PSD-95; PSD95; SAP 90; SAP-90; SAP90; Synapse associated protein 90; Synapse-associated protein 90; Tax interaction protein 15.
Research Area	Cell biology immunology Neurobiology Cell type markers
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse,Rat (predicted:Human,Dog,Pig,Cow,Horse,Rabbit,Sheep)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	80kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human PSD95: 468-560/724
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

This gene encodes a member of the membrane-associated guanylate kinase (MAGUK) family. It heteromultimerizes with another MAGUK protein, DLG2, and is recruited into NMDA receptor and potassium channel clusters. These two MAGUK proteins may interact at postsynaptic sites to form a multimeric scaffold for the clustering of receptors, ion channels, and associated signaling proteins. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product Detail

Function:
Interacts with the cytoplasmic tail of NMDA receptor subunits and shaker-type potassium channels. Required for synaptic plasticity associated with NMDA receptor signaling. Overexpression or depletion of DLG4 changes the ratio of excitatory to inhibitory synapses in hippocampal neurons. May reduce the amplitude of ACCN3 acid-evoked currents by retaining the channel intracellularly. May regulate the intracellular trafficking of ADR1B.

Subunit:
Interacts with ANKS1B, KLHL17 and PRR7. Interacts through its PDZ domains with NETO1. Interacts through its first two PDZ domains with GRIN2A, GRIN2B, GRIN2C, GRIN2D, ACCN3, certain splice forms of GRIN1, KCND2, CXADR and SYNGAP1. Interacts through its second PDZ domain with the PDZ domain of NOS1 or the C-terminus of CAPON. May interact with HTR2A. Interacts through its guanylate kinase-like domain with DLGAP1/GKAP, DLGAP2, DLGAP3, DLGAP4, MAP1A and BEGAIN. Interacts through its third PDZ domain with CRIPT (By similarity). Interacts through its first two PDZ domains with KCNA1, KCNA2, KCNA3, KCNA4 and ERBB4. Interacts through its first PDZ domain with GRIK2, KCNA4 and CRIPT. Interacts through its third PDZ domain with NLGN1, and probably with NLGN2 and NLGN3. Interacts through its guanylate kinase-like domain with KIF13B. Isoform 2 interacts through an L27 domain with HGS/HRS and the first L27 domain of CASK. Interacts with LRFN1, LRFN2 and LRFN4. Interacts with ANO2, ADAM22 and LGI1. Interacts with FRMPD4 (via C-terminus). Interacts (via PDZ1 and PDZ2 domains) with LRRC4; LRRC4B and SEMA4C. Interacts (via guanylate kinase-like domain) with SIPA1L1.

Subcellular Location:
Cell membrane; Peripheral membrane protein. Cell junction, synapse, postsynaptic cell membrane, postsynaptic density. Cell junction, synapse. Cell junction, synapse, synaptosome. Note=High levels in postsynaptic density of neurons in the forebrain. Also in presynaptic region of inhibitory synapses formed by cerebellar basket cells on axon hillocks of Purkinje cells.

Tissue Specificity:
Brain.

Post-translational modifications:
Palmitoylation of isoform 1 is required for targeting to postsynaptic density.

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

SWISS:
P78352

Gene ID:
1742

Database links:

Entrez Gene: 1742 Human

Entrez Gene: 13385 Mouse

Entrez Gene: 29495 Rat

Entrez Gene: 100137840 Cow

Omim: 602887 Human

SwissProt: P78352 Human

SwissProt: Q62108 Mouse

SwissProt: P31016 Rat

Unigene: 463928 Human

Unigene: 27256 Mouse

Unigene: 9765 Rat

该蛋白质 PSD95 能夠帮助建立神经突触的架构，并且促成突触其他部分的成熟，

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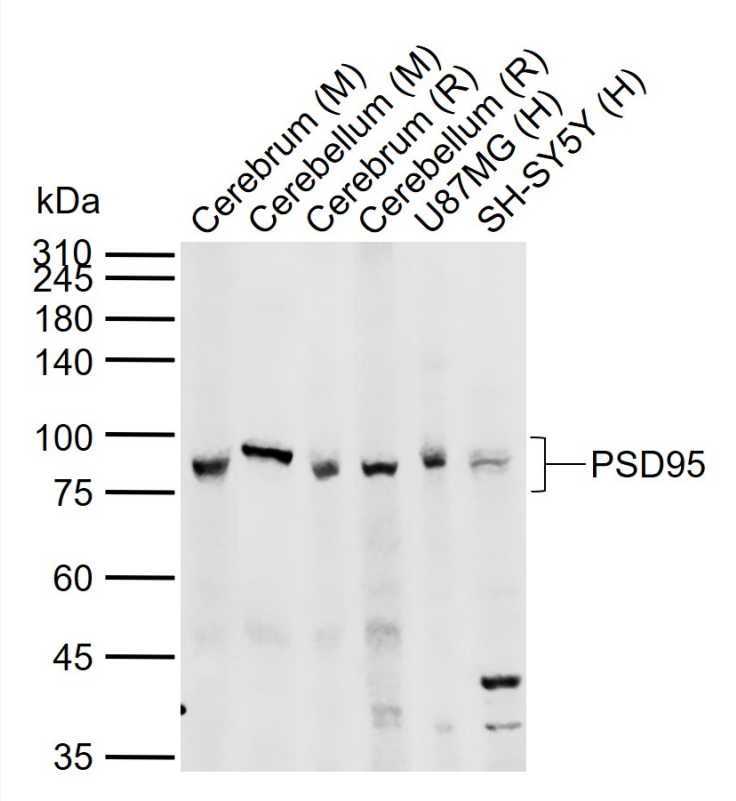
例如加强目标細胞上的 glutamate 受体的聚集、增加树突棘（dendritic spines）的数量和大小以及增加神经传导物质 glutamate (谷氨酸盐)释放的量。这种蛋白质与阿滋海默症有关。

Product Picture



Sample:

Lane 1: Mouse Cerebrum tissue lysates

Lane 2: Mouse Cerebellum tissue lysates

Lane 3: Rat Cerebrum tissue lysates

Lane 4: Rat Cerebellum tissue lysates

Lane 5: Human U87MG cell lysates

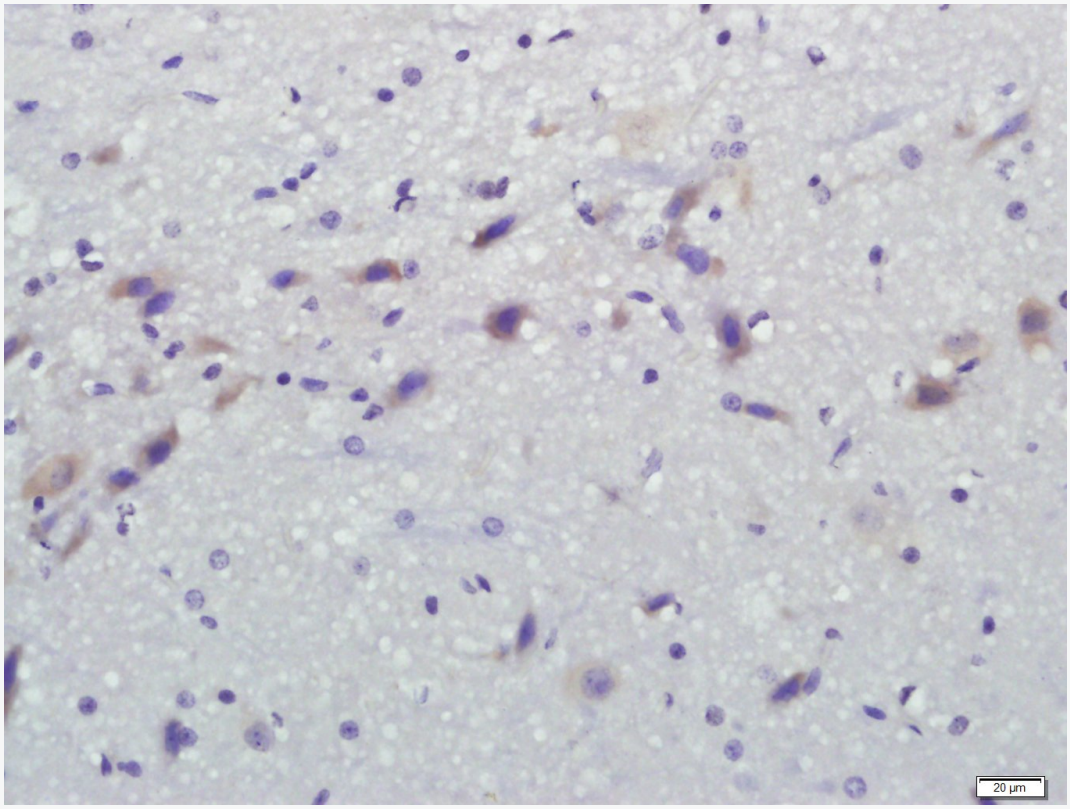
Lane 6: Human SH-SY5Y cell lysates

Primary: Anti-PSD95 (SL0179R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 80 kDa

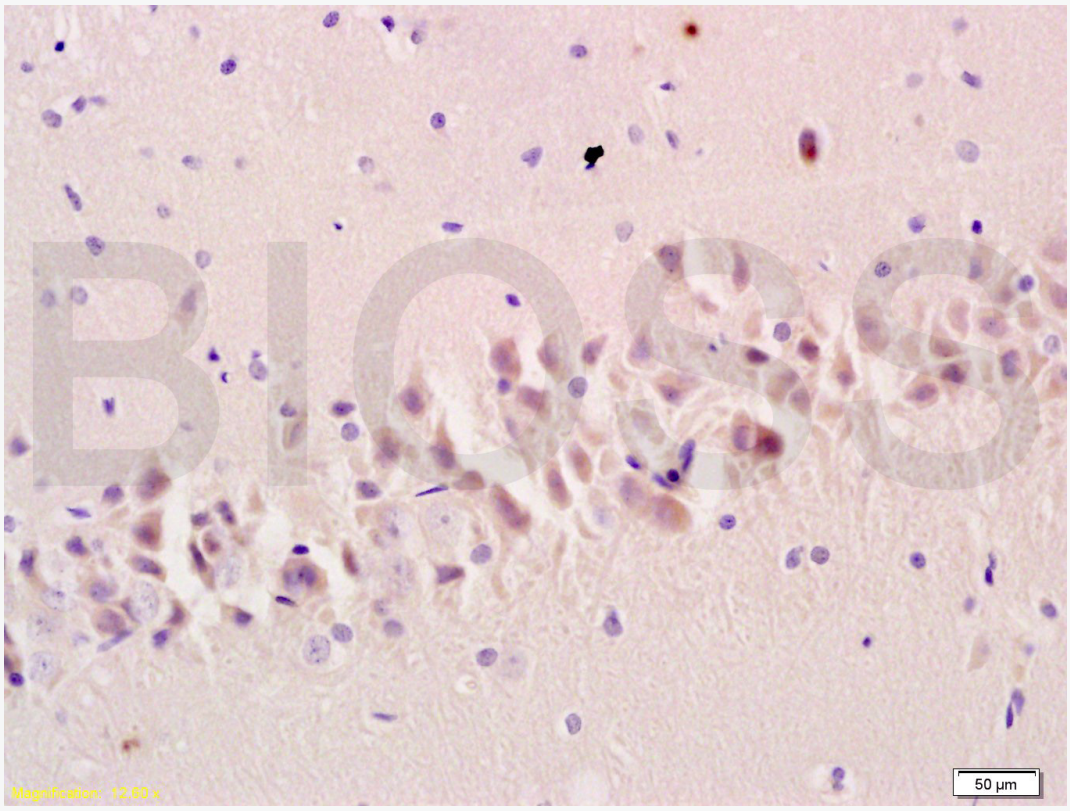
Observed band size: 85 kDa



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-PSD-95 Polyclonal Antibody, Unconjugated(SL0179R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023)

and DAB(C-0010) staining



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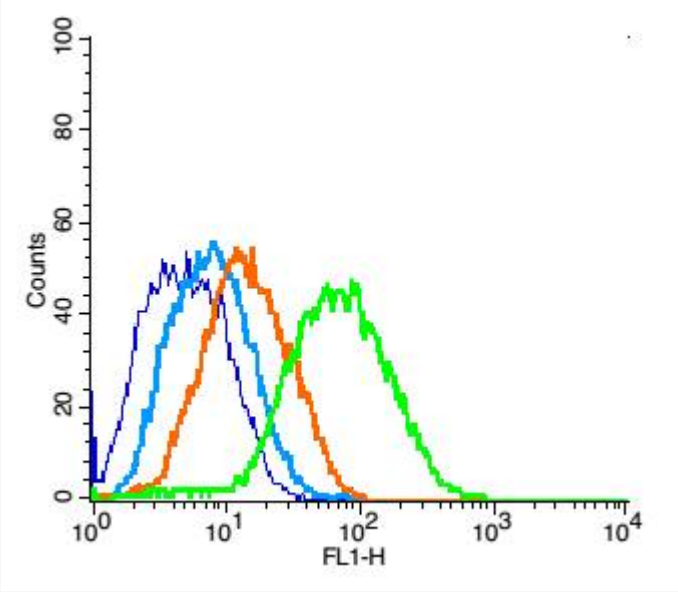

Blank control (blue line): Mouse brain (blue).

Primary Antibody (green line): Rabbit Anti-PSD95 antibody (SL0179R)

Dilution: 1μg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC

Dilution: 1μg /test.

Protocol

The cells were fixed with 2% paraformaldehyde for 10 min at room temperature, and then stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.