

DLG4 Antibody (C-term) (Rat) (Ascites)
Mouse Monoclonal Antibody (Mab)
Catalog # AM1833b

Specification

DLG4 Antibody (C-term) (Rat) (Ascites) - Product Information

Application	WB, IHC-P,E
Primary Accession	P31016
Other Accession	O62108 , P78352
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Calculated MW	80465
Antigen Region	677-706

DLG4 Antibody (C-term) (Rat) (Ascites) - Additional Information

Gene ID 29495

Other Names

Disks large homolog 4, Postsynaptic density protein 95, PSD-95, Synapse-associated protein 90, SAP-90, SAP90, Dlg4, Dlgh4, Psd95

Target/Specificity

This DLG4 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 677-706 amino acids from the C-terminal region of human DLG4.

Dilution

WB~~1:500~1000
IHC-P~~1:50~100

Format

Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

DLG4 Antibody (C-term) (Rat) (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

DLG4 Antibody (C-term) (Rat) (Ascites) - Protein Information

Name Dlg4 {ECO:0000312|RGD:68424}

Function Postsynaptic scaffolding protein that plays a critical role in synaptogenesis and synaptic

plasticity by providing a platform for the postsynaptic clustering of crucial synaptic proteins (PubMed:[15317815](#), PubMed:[15358863](#), PubMed:[19596852](#), PubMed:[20628354](#), PubMed:[23300088](#), PubMed:[26679993](#)). 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 ASIC3 acid-evoked currents by retaining the channel intracellularly. May regulate the intracellular trafficking of ADR1B (By similarity). Also regulates AMPA-type glutamate receptor (AMPA) immobilization at postsynaptic density keeping the channels in an activated state in the presence of glutamate and preventing synaptic depression (PubMed:[19596852](#)). Under basal conditions, cooperates with FYN to stabilize palmitoyltransferase ZDHHC5 at the synaptic membrane through FYN-mediated phosphorylation of ZDHHC5 and its subsequent inhibition of association with endocytic proteins (By similarity).

Cellular Location

Cell membrane; Lipid-anchor; Cytoplasmic side. Postsynaptic density. Synapse. Cytoplasm Cell projection, axon. Cell projection, dendritic spine. Cell projection, dendrite. Presynapse 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. Suppression of neuronal activity induces synaptic accumulation and clustering of DLG4 (PubMed:[19596852](#)).

Tissue Location

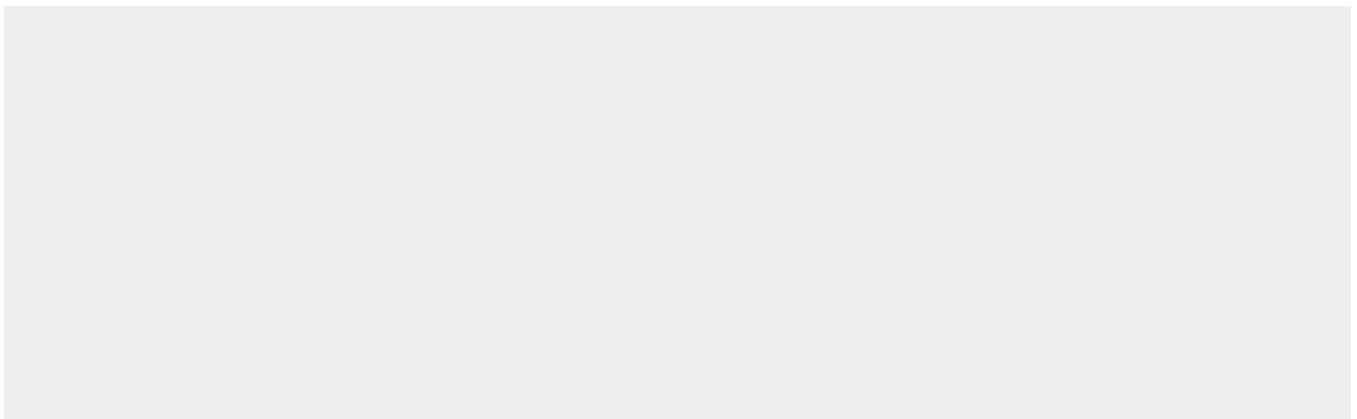
Expressed in brain (at protein level) (PubMed:[12151521](#), PubMed:[20962234](#), PubMed:[27307232](#)). Detected in juxtapanodal zones in the central nervous system and at nerve terminal plexuses of basket cells in the cerebellum (PubMed:[20089912](#)) Expressed in cerebrum (PubMed:[27307232](#)). Expressed in hippocampal neurons (at protein level) (PubMed:[11502259](#), PubMed:[12151521](#), PubMed:[27307232](#), PubMed:[27756895](#)). Isoform 1 and isoform 2: highly expressed in cerebellum, cortex, hippocampus, and corpus striatum (PubMed:[12151521](#), PubMed:[20962234](#)).

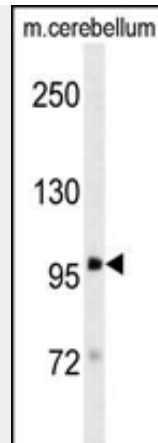
DLG4 Antibody (C-term) (Rat) (Ascites) - Protocols

Provided below are standard protocols that you may find useful for product applications.

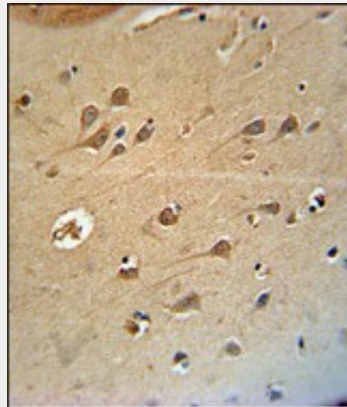
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DLG4 Antibody (C-term) (Rat) (Ascites) - Images





Western blot analysis of RAT DLG4 Antibody (C-term) (Cat. #AM1833b) in mouse cerebellum tissue lysates (35µg/lane).DLG4 (arrow) was detected using the purified Mab.(1:100)



RAT DLG4 Antibody (C-term)(Ascites) (Cat. #AM1833b) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the RAT DLG4 Antibody (C-term)(Ascites) for immunohistochemistry. Clinical relevance has not been evaluated.

DLG4 Antibody (C-term) (Rat) (Ascites) - Background

a molecular scaffolding protein that binds and clusters N-methyl-D-aspartate receptors at neuronal synapses; may be involved in guanine nucleotide-mediated signal transduction pathway [RGD]

DLG4 Antibody (C-term) (Rat) (Ascites) - References

SAP102 is a highly mobile MAGUK in spines. Zheng CY, et al. J Neurosci, 2010 Mar 31. PMID 20357126. Synaptic clustering of PSD-95 is regulated by c-Abl through tyrosine phosphorylation. de Arce KP, et al. J Neurosci, 2010 Mar 10. PMID 20220006. Transduced PDZ1 domain of PSD-95 decreases Src phosphorylation and increases nNOS (Ser847) phosphorylation contributing to neuroprotection after cerebral ischemia. Wang WW, et al. Brain Res, 2010 Apr 30. PMID 20197063. Hidden dynamic allostery in a PDZ domain. Petit CM, et al. Proc Natl Acad Sci U S A, 2009 Oct 27. PMID 19828436. Integrin-linked kinase is involved in cocaine sensitization by regulating PSD-95 and synapsin I expression and GluR1 Ser845 phosphorylation. Chen Q, et al. J Mol Neurosci, 2010 Mar. PMID 19629758.