

GRIP1 Antibody

Catalog # ASC11614

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y3R0
Other Accession	NP_066973 , 223890252
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	122422
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	GRIP1 antibody can be used for detection of GRIP1 by Western blot at 1 - 2 μ g/mL.

Additional Information

Gene ID	23426
Other Names	Glutamate receptor-interacting protein 1, GRIP-1, GRIP1
Target/Specificity	GRIP1;
Reconstitution & Storage	GRIP1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	GRIP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRIP1
Function	May play a role as a localized scaffold for the assembly of a multiprotein signaling complex and as mediator of the trafficking of its binding partners at specific subcellular location in neurons (PubMed: 10197531). Through complex formation with NSG1, GRIA2 and STX12 controls the intracellular fate of AMPAR and the endosomal sorting of the GRIA2 subunit toward recycling and membrane targeting (By similarity).
Cellular Location	Cytoplasmic vesicle. Perikaryon {ECO:0000250 UniProtKB:P97879}. Cell projection, dendrite {ECO:0000250 UniProtKB:P97879}. Cytoplasm {ECO:0000250 UniProtKB:P97879}. Endomembrane system {ECO:0000250 UniProtKB:P97879}; Peripheral membrane protein {ECO:0000250 UniProtKB:P97879}. Postsynaptic cell membrane {ECO:0000250 UniProtKB:P97879}. Postsynaptic density

{ECO:0000250|UniProtKB:P97879}. Endoplasmic reticulum membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:P97879}. Note=Membrane-associated with vesicles, peri-Golgi complexes and endoplasmic reticulum. Enriched in postsynaptic plasma membrane and postsynaptic densities {ECO:0000250|UniProtKB:P97879}

Background

GRIP1 Antibody: Glutamate receptors play an important role in neural plasticity, development and degeneration. The glutamate receptor interacting proteins, GRIP1 and GRIP2, members of the PDZ domain-containing protein family, mediate the trafficking and membrane organization of a number of transmembrane proteins. GRIP1 and GRIP2 specifically bind to the AMPA receptor subunits, GluR 2/3 and are involved in the targeting of GluR 2/3 to the synapse. GRIP1 is expressed in early development before the expression of AMPA receptors, while GRIP2 expression parallels that of AMPA receptors during later developmental stages. GRIP1 and GRIP2 may be involved in the induction of cerebellar long-term depression (LTD).

References

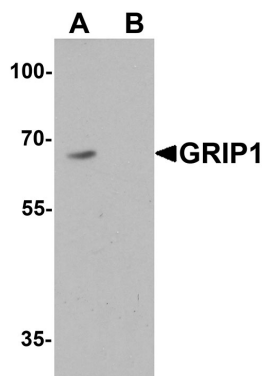
Nakanishi S. Molecular diversity of glutamate receptors and implications for brain function. *Science* 1992; 258:597-603.

Dong H, Zhang P, Song I, et al. Characterization of the glutamate receptor-interacting proteins GRIP1 and GRIP2. *J. Neurosci.* 1999; 19:6930-41.

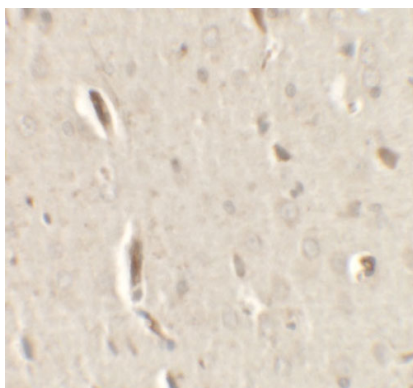
Mao L, Takamiya K, Thomas G, et al. GRIP1 and 2 regulate activity-dependent AMPA receptor recycling via exocyst complex interactions. *Proc. Natl. Acad. Sci. USA* 2010; 107:19038-43.

Thomas GM, Hayashi T, Chiu SL, et al. Palmitoylation by DHHC5/8 targets GRIP1 to dendritic endosomes to regulate AMPA-R trafficking. *Neuron* 2012; 73:482-96.

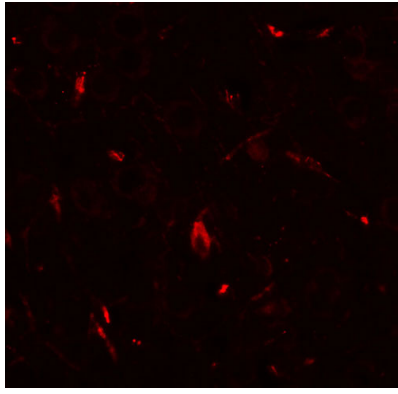
Images



Western blot analysis of GRIP1 in HeLa cell lysate with GRIP1 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of GRIP1 in rat brain tissue with GRIP1 antibody at 2.5 µg/ml.



Immunofluorescence of GRIP1 in rat brain tissue with GRIP1 antibody at 20 µg/ml.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.