Datasheet for ABIN968471

anti-GRIP1 antibody (AA 877-1067)

3 Images | 4 Publications

Go to Product page

Overview

Quantity:	50 µg
Target:	GRIP1
Binding Specificity:	AA 877-1067
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This GRIP1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), BioImaging (BI)

Product Details

Immunogen:	Rat GRIP aa. 877-1067
Clone:	32-GRIP
Isotype:	IgG1
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	GRIP1
Alternative Name:	GRIP (GRIP1 Products)
Background:	Rapid neuronal excitation within the CNS is mediated by the interactions of receptors with their respective neurotransmitters, such as glutamate. Glutamate has a diverse array of receptors that are categorized into two distinct groups: ionotropic and metabotropic. Ionotropic receptors are ligand-gated channels and can be subdivided into two classes: NMDA and AMPA receptors. AMPA receptors are composed of four homologous subunits (GluR1-4) that differentially combine to form a variety of receptor subtypes. Interactions of the subunits with cytoplasmic proteins mediate the transmission of extracellular signals. GRIP (Glutamate Receptor Interacting Protein) specifically interacts with the C-terminus of the GluR2 subunit. GRIP lacks a catalytic domain, but contains seven PDZ domains which are motifs that mediate protein-protein interactions. Since only the fourth and fifth PDZ domains are utilized in interaction with GluR2, it is thought that the remaining PDZ domains interact with other unidentified proteins. Therefore, GRIP functions as an adaptor that links AMPA receptors to cytoskeletal and/or signaling molecules and, in turn, clusters them at the synapse. Synonyms: Glutamate Receptor Interacting Protein
Molecular Weight:	130 kDa
Pathways:	Intracellular Steroid Hormone Receptor Signaling Pathway

Application Details

Application Notes:	Bioimaging: Methanol Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100 µl/well 90% methanol. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30 minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Wash three times with PBS. Flick out PBS and add second step reagent. Incubate for 1 hour at RT. Wash three times with PBS. Triton-X 100 Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100 µl/well 0.1% Triton-X 100. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30 minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Flick out and wash three times with PBS. Flick out and add second step reagent.

Application Details

	Incubate for 1 hour at RT. Flick out and wash three times with PBS.
Comment:	Related Products: ABIN968545, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

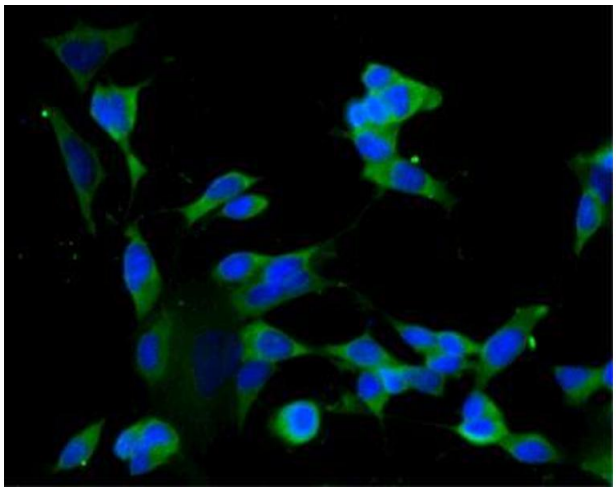
Product cited in:

Fallon, Moreau, Croft, Labib, Gu, Fon: "Parkin and CASK/LIN-2 associate via a PDZ-mediated interaction and are co-localized in lipid rafts and postsynaptic densities in brain." in: **The Journal of biological chemistry**, Vol. 277, Issue 1, pp. 486-91, (2002) (PubMed).

Setou, Seog, Tanaka, Kanai, Takei, Kawagishi, Hirokawa: "Glutamate-receptor-interacting protein GRIP1 directly steers kinesin to dendrites." in: **Nature**, Vol. 417, Issue 6884, pp. 83-7, (2002) (PubMed).

Bowery, Brown: "The cloning of GABA(B) receptors." in: **Nature**, Vol. 386, Issue 6622, pp. 223-4, (1997) (PubMed).

Dong, OBrien, Fung, Lanahan, Worley, Huganir: "GRIP: a synaptic PDZ domain-containing protein that interacts with AMPA receptors." in: **Nature**, Vol. 386, Issue 6622, pp. 279-84, (1997) (PubMed).



Immunofluorescence

Image 1. Immunofluorescence staining of undifferentiated SH-SY5Y cells (Human neuroblastoma, ATCC CRL-2266) (left) and differentiated SH-SY5Y cells (right). Undifferentiated cells were seeded in a collagen coated 384-well imaging plate at ~ 8,000 cells per well. After overnight incubation, cells were stained using the methanol fix/perm protocol and the mouse anti-GRIP antibody. Differentiated cells were seeded in a 96-well, collagen coated imaging plate at ~ 5,000 cells per well. Cells were incubated with 50 mM ATRA (Sigma-Aldrich) for 5 days, followed by 50 ng/ml BDNF (Sigma-Aldrich) for 5 days. Differentiated cells were fixed and stained using the methanol fix/perm protocol, and the mouse anti-GRIP antibody. The second step reagent in both cases was Alexa Fluor® 488 goat anti-mouse Ig (Invitrogen). The images were taken on a BD Pathway™ 855 or 435 Bioimager using a 20x objective. This antibody also stained undifferentiated SK-N-SH (Human neuroblastoma, ATCC HTB-11), C6 (Rat glioma, ATCC CCL-107), U-87 MG (Human glioblastoma cells, ATCC HTB-14) and U-373 cells (Human glioblastoma cells, ATCC HTB-17, discontinued) using both the Triton-X 100 and methanol fix/perm protocols.

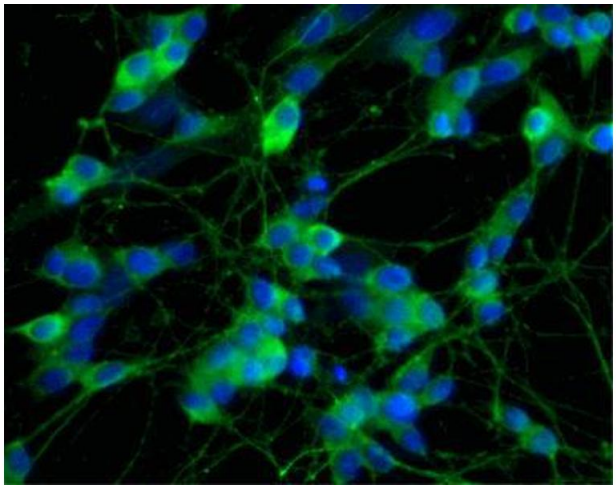


Image 2.

Western Blotting

Image 3. Western blot analysis of GRIP on a rat cerebrum lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the mouse anti-GRIP antibody.