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GRID1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54725

Specification

GRID1 Polyclonal Antibody - Product Information

Application	**IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q9ULK0
Reactivity	**Rat, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**110 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human GRID1**
Epitope Specificity	**501-600/1009**
Isotype	**IgG**
Purity	
affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Cell membrane; Multi-pass membrane protein (By similarity). Cell junction, synapse, postsynaptic cell membrane; Multi-pass membrane protein (By similarity).**
SIMILARITY	**Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. GRID1 subfamily.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
Glutamate receptors mediate most excitatory neurotransmissions in the brain and play an important role in neural plasticity, neural development and neurodegeneration. Ionotropic glutamate receptors are divided into two categories, namely NMDA receptors and kainate/AMPA receptors, both of which contain glutamate-gated, cation-specific ion channels. Kainate/AMPA receptors consist of seven structurally related subunits, designated GluR-1 to -7, and are primarily responsible for fast excitatory neurotransmissions carried out by glutamate. GluR-delta 1 (Glutamate receptor delta-1 subunit), also known as GRID1, is a multi-pass membrane protein that belongs to the kainate/AMPA receptor family and is expressed primarily in the brain. Localized to the cell junction and the postsynaptic cell membrane, GluR-delta 1 functions as a glutamate receptor that regulates synaptic transmissions in the central nervous system (CNS) and is thought to play an important role in synaptic plasticity. Defects in the gene encoding GluR-delta 1 are associated with schizophrenia, a chronic and severe brain disorder.

GRID1 Polyclonal Antibody - Additional Information

Gene ID 2894

Other Names
Glutamate receptor ionotropic, delta-1, GluD1, GluR delta-1 subunit, GRID1, KIAA1220

Dilution
IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. 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 ℃.

GRID1 Polyclonal Antibody - Protein Information

Name GRID1 (HGNC:4575)

Synonyms KIAA1220

Function
Member of the ionotropic glutamate receptor family, which plays a crucial role in synaptic organization and signal transduction in the central nervous system. Although it shares structural features with ionotropic glutamate receptors, does not bind glutamate as a primary ligand (PubMed:38060673). Instead, forms trans-synaptic adhesion complexes with presynaptic neurexins and cerebellins, regulating NMDA and AMPA receptor activity and influencing synaptic plasticity through signal transduction (By similarity). In the presence of neurexins and cerebellins, forms cation-selective channels that are proposed to be gated by glycine and D-serine (By similarity). However, recent research disputes this ligand-gated cation channel activity (PubMed:39052831). Cation-selective ion channel can be triggered by GRM1 in dopaminergic neurons (By similarity). Also acts as a receptor for GABA, modulating inhibitory synaptic plasticity through non- ionotropic mechanisms (PubMed:38060673).

Cellular Location
Postsynaptic cell membrane; Multi-pass membrane protein

GRID1 Polyclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation

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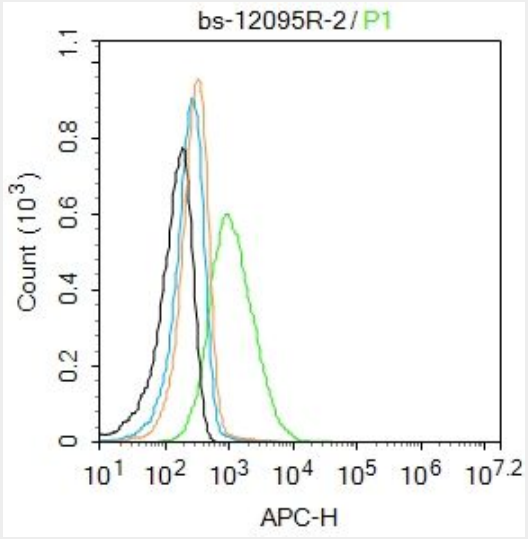
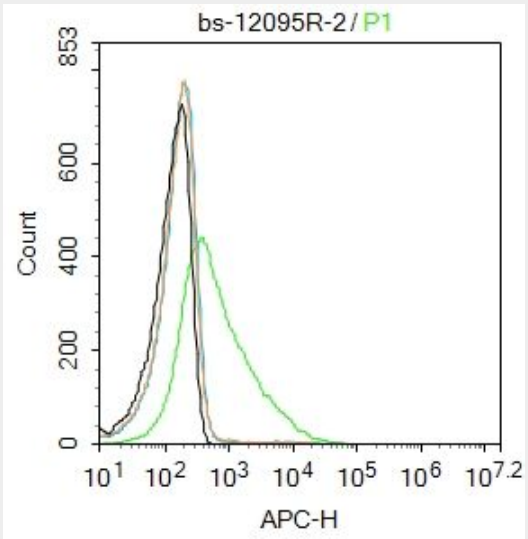
- Flow Cytomety
- Cell Culture

GRID1 Polyclonal Antibody - Images



Blank control: Hela.
Primary Antibody (green line): Rabbit Anti-GRID1 antibody (bs-12095R)
Dilution: 2 µg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .
Secondary Antibody : Goat anti-rabbit IgG-APC
Dilution: 1 µg /test.
Protocol
The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control: K562.
Primary Antibody (green line): Rabbit Anti-GRID1 antibody (bs-12095R)
Dilution: 2 µg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-APC
Dilution: 1 µg /test.
Protocol
The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.