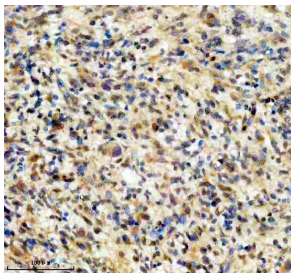
GRID1 Antibody / Glutamate receptor ionotropic, delta-1 Antibody (FY13546)

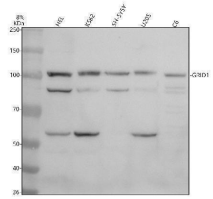
Catalog No.	Formulation	Size
FY13546	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

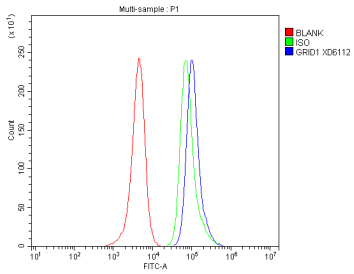
Species Reactivity	Human, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9ULK0
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5 ug/ml
Limitations	This GRID1 Antibody / Glutamate receptor ionotropic, delta-1 Antibody is intended for research use only.



GRID1 Antibody by IHC in human glioma tissue. Immunohistochemistry of paraffin-embedded human glioma using Glutamate receptor ionotropic, delta-1 Antibody demonstrates brown immunoreactivity among tumor cells, with heterogeneous staining distributed throughout the examined field. Blue hematoxylin counterstaining distinguishes cell nuclei from the surrounding immunoreactive regions. Tissue sections underwent heat-mediated antigen retrieval in EDTA buffer at pH 8.0, followed by blocking with 10% goat serum. Primary antibody was applied at 2 ug/mL overnight at 4oC, and bound antibody was detected using an HRP-conjugated secondary antibody and DAB chromogen. The image documents GRID1-associated immunoreactivity in human glioma.



GRID1 Antibody by WB in human and rat cell lysates. Western blot analysis using Glutamate receptor ionotropic, delta-1 Antibody detects a principal band near 112 kDa, consistent with the calculated GRID1 molecular weight. Lanes 1-4 contain human HEL, K562, SH-SY5Y and U2OS whole-cell lysates, respectively; lane 5 contains rat C6 cell lysate. Reduced samples containing 30 ug protein per lane were resolved by 8% SDS-PAGE and transferred to nitrocellulose. Membranes were incubated with 0.5 ug/mL primary antibody overnight at 4oC, followed by HRP-conjugated secondary antibody and chemiluminescent detection. The labeled band migrates at a comparable position across the five samples.



GRID1 Antibody by FACS in SH-SY5Y cells. Flow cytometry analysis using Glutamate receptor ionotropic, delta-1 Antibody shows a blue antibody-stained fluorescence distribution shifted to the right of the red unstained control, with the green isotype control also displayed for comparison. SH-SY5Y cells were fixed in 4% paraformaldehyde, blocked with normal goat serum and incubated with 1 ug primary antibody per 1 x 10^6 cells for 30 minutes at 20oC. A fluorescent anti-rabbit secondary antibody was applied for an additional 30 minutes. The histogram illustrates GRID1-associated staining relative to the control populations under these assay conditions.

Description

GRID1 Antibody / Glutamate receptor ionotropic, delta-1 Antibody detects GRID1, commonly called GluD1, a member of the ionotropic glutamate receptor superfamily. Although its sequence and overall structure resemble those of other glutamate receptors, GluD1 has distinctive properties and is not simply a conventional glutamate-gated ion channel. It is associated with neuronal membranes and contributes to the organization and function of synaptic connections. The delta receptor subfamily includes GRID1 and GRID2, which have related architectures but differ in their anatomical distribution and physiological contributions.

GluD1 participates in protein interaction networks that help organize communication between neurons. Delta glutamate receptors can engage synaptic adhesion systems involving cerebellins and neurexins, creating molecular bridges between pre- and postsynaptic compartments. Such interactions influence synapse formation, maintenance, and the alignment of signaling machinery. GRID1 has also been associated with changes in synaptic transmission and plasticity, although its actions vary with neuronal circuit and developmental stage. Understanding this receptor requires distinguishing structural roles at synapses from direct ion conduction, since the receptor family does not follow the same activation rules as AMPA or NMDA receptors.

Altered GRID1 function has attracted interest in neurodevelopmental and neuropsychiatric biology. Genetic and experimental studies suggest that disturbances in GluD1-dependent synaptic organization can influence neural circuitry and behavior. These associations do not imply that every change in GRID1 expression has the same consequence across the nervous system. The receptor operates within larger networks of adhesion molecules, scaffolding proteins, and activity-dependent regulators. NSJ Bioreagents offers reagents associated with this neuronal protein target. A GRID1 Antibody relates to the biology of glutamate receptor delta-1 and its contribution to synaptic architecture and neuronal communication.

Explore related research targets in our Neuroscience Antibodies collection.

Application Notes

The optimal working dilution of the GRID1 Antibody / Glutamate receptor ionotropic, delta-1 Antibody should be determined empirically by the investigator.

Immunogen

The GRID1 Antibody was generated using e. coli-derived human GRID1 recombinant protein (amino acids H129-L925).

Storage

After reconstitution, the GRID1 Antibody may be stored at 4oC for up to one month. For longer storage, aliquot and freeze at -20oC for up to six months. Avoid repeated freezing and thawing.

Alternate Names

GRID1 antibody, Glutamate receptor ionotropic, delta-1 antibody, Glutamate receptor ionotropic antibody, delta-1 antibody, glutamate ionotropic receptor delta type subunit 1 antibody, KIAA1220 antibody, GluD1 antibody, GluR delta-1 subunit antibody

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