Human GluR4 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1059705

Catalog Number: MAB113631

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GluR4 in direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1059705
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Synthetic peptide Accession # P48058
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

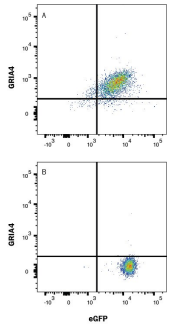
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	GRIA4 HEK293/eGFP and irrelevant HEK293/eGFP transfectants
Immunocytochemistry	5-25 µg/mL	Immersion fixed Transfected HEK293 Human Embryonic Kidney Cell Line (Positive) and absent in Wild Type HEK293 Human Embryonic Kidney Cell Line (Negative)

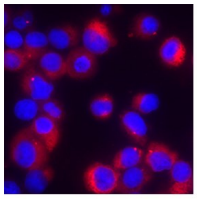
DATA

Flow Cytometry

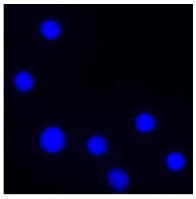


Detection of GluR4 in HEK293 cells transfected with Human GRIA4 and eGFP vs irrelevant cells by Flow Cytometry. HEK293 cells transfected with Human GRIA4 and eGFP (A) vs irrelevant and eGFP (B) was stained with Mouse Anti-Human GluR4 Monoclonal Antibody (Catalog # MAB113631) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). View our protocol for Staining Membrane-associated Proteins.

Immunocytochemistry



Transfected HEK293 (Positive) cells



Wild-type HEK293 (Negative) cells

Detection of GluR4 in Transfected HEK293 Cells (Positive) and absent in Wild Type HEK293 Cells (Negative). GluR4 was detected in immersion fixed Transfected HEK293 Human Embryonic Kidney Cell Line (Positive) and absent in Wild Type HEK293 Cell Line (Negative) using Mouse Anti-Human GluR4 Monoclonal Antibody (Catalog # MAB113631) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Ionotropic glutamate receptor 4 (GluR4) is a 100.9 kDa protein that is part of a family (iGluR 1-7) of ligand-gated ion channels that mediates fast transmission of neurotransmitter signals in neuronal cells. These receptors respond to several agonists including N-methyl-d-aspartic acid (NMDA), α-amino-3-hydroxyl-5-methylisoxazole-4-proprionic acid (AMPA), or kainic acid (KA). iGluRs are tetrameric structures made by the dimerization of dimers. These receptors can form through a combination of iGluR1-iGluR4 subunits. Mature human GluR4 is a 902 amino acid (aa) molecule, and alternate gene-splicing results in transcript variations encoding different isoforms that may effect their signal transduction properties. GluR4 is made up of an extracellular amino-terminal domain (ATD), ligand binding domain (LBD), a common pore-forming transmembrane domain (TMD) and an intracellular C-terminal domain (CTD). GluR4's clam-shell shaped LBD binds to agonists. The LBD closes upon ligand binding to induce a conformational change to the TMD, resulting in the ion channel opening. GluR4 is highly expressed in areas that utilize fast kinetics and rapid desensitization. Examples of GluR4 expression include tissues of the central cervical nucleus in rats, the outer plexiform layer of goldfish, the retinal cells of chicken embryos and the human cerebral cortex.

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