

GLUR4 Rabbit pAb

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Catalog # AP54705

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P48058
Predicted	Human, Mouse, Rat, Chicken, Dog, Horse, Rabbit, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	100871
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GluA4/Ionotropic Glutamate receptor 4
Epitope Specificity	351-450/902
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. Cell junction, synapse, postsynaptic cell membrane; Multi-pass membrane protein. Cell projection, dendrite. Note=Interaction with CNIH2, CNIH3 and PRKCG promotes cell surface expression (By similarity).
SIMILARITY	Belongs to the glutamate-gated ion channel (TC1.A.10.1) family. GRIA4 subfamily.
SUBUNIT	Homotetramer or heterotetramer of pore-forming glutamate receptor subunits. Tetramers may be formed by the dimerization of dimers. Interacts with EPB41L1 via its C-terminus (By similarity). Found in a complex with GRIA1, GRIA2, GRIA3, CNIH2, CNIH3, CACNG2, CACNG3, CACNG4, CACNG5, CACNG7 and CACNG8. Interacts with CACNG5 and PRKCG (By similarity).
Post-translational modifications	Palmitoylated. Depalmitoylated upon glutamate stimulation. Cys-611 palmitoylation leads to Golgi retention and decreased cell surface expression. In contrast, Cys-837 palmitoylation does not affect cell surface expression but regulates stimulation-dependent endocytosis (By similarity). Phosphorylated at Ser-862 by PRKCG; phosphorylation increases plasma membrane-associated GRI4 expression (By similarity).
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 are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. These receptors are heteromeric protein complexes composed of multiple subunits, arranged to form ligand-gated ion channels. The classification of glutamate receptors is based on their activation by different pharmacologic agonists. The subunit encoded by this gene belongs to a family of AMPA (alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate)-sensitive glutamate receptors, and is subject to RNA editing (AGA->GGA; R->G). Alternative splicing of this gene results in transcript variants encoding different isoforms, which may vary in their signal transduction properties.

Additional Information

Gene ID	2893
Other Names	Glutamate receptor 4, GluR-4, GluR4, AMPA-selective glutamate receptor 4, GluR-D, Glutamate receptor ionotropic, AMPA 4, GRIA4 {ECO:0000303 PubMed:29220673, ECO:0000312 HGNC:HGNC:4574}
Target/Specificity	Detected in cerebellum (at protein level).
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C 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 °C.

Protein Information

Name	GRIA4 {ECO:0000303 PubMed:29220673, ECO:0000312 HGNC:HGNC:4574}
Function	Ionotropic glutamate receptor that functions as a ligand- gated cation channel, gated by L-glutamate and glutamatergic agonists such as alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA), quisqualic acid, and kainic acid (By similarity). L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system and plays an important role in fast excitatory synaptic transmission (By similarity). Binding of the excitatory neurotransmitter L-glutamate induces a conformation change, leading to the opening of the cation channel, and thereby converts the chemical signal to an electrical impulse upon entry of monovalent and divalent cations such as sodium and calcium. The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist (By similarity). In the presence of CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of L-glutamate (PubMed: 21172611).
Cellular Location	Cell membrane {ECO:0000250 UniProtKB:P19493}; Multi-pass membrane protein {ECO:0000250 UniProtKB:P19493} Postsynaptic cell membrane {ECO:0000250 UniProtKB:P19493}; Multi-pass membrane protein {ECO:0000250 UniProtKB:P19493}. Cell projection, dendrite {ECO:0000250 UniProtKB:P19493}. Postsynaptic cell membrane {ECO:0000250 UniProtKB:P42262}; Multi-pass membrane protein {ECO:0000250 UniProtKB:P42262}

Background

Glutamate receptors are the predominant excitatory neurotransmitter receptors in the mammalian brain and are activated in a variety of normal neurophysiologic processes. These receptors are heteromeric protein complexes composed of multiple subunits, arranged to form ligand-gated ion channels. The classification of glutamate receptors is based on their activation by different pharmacologic agonists. The subunit encoded by this gene belongs to a family of AMPA (alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionate)-sensitive glutamate receptors, and is subject to RNA editing (AGA->GGA; R->G). Alternative splicing of this gene results in transcript variants encoding different isoforms, which may vary in their signal transduction properties.

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