

# Phospho-GluR1 (S845) Antibody

Rabbit mAb Catalog # AP90801

### **Product Information**

Application WB Primary Accession P42261

**Reactivity** Rat, Human, Mouse

**Clonality** Monoclonal

**Other Names** Glutamate receptor 1; GluR-1; AMPA-selective glutamate receptor 1; GluR-A;

GluR-K1; GluRA; GluRK1; Glutamate receptor ionotropic, AMPA 1; GluA1;

GRIA1; GLUH1; GLUR1;

IsotypeRabbit IgGHostRabbitCalculated MW101506

#### Additional Information

**Dilution** WB 1:500~1:1000 **Purification** Affinity-chromatography

**Immunogen** A synthesized peptide derived from human GluR1

**Description** AMPA- (α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid), kainate-, and

NMDA- (N-methyl-D-aspartate) receptors are the three main families of ionotropic glutamate-gated ion channels. AMPA receptors (AMPARs) are comprised of four subunits (GluR 1-4), which assemble as homo- or better tetramers to mediate the majority of fact excitatory transmissions in

hetero-tetramers to mediate the majority of fast excitatory transmissions in the central nervous system. AMPARs are implicated in synapse formation,

stabilization, and plasticity.

**Storage Condition and Buffer** Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term.

Avoid freeze / thaw cycle.

#### **Protein Information**

Name GRIA1 ( HGNC:4571)

**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 (PubMed: 1311100, PubMed: 20805473,

PubMed:21172611, PubMed:28628100, PubMed:35675825). L- glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system. 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 in a transient inactive state, characterized by the presence of bound agonist (By similarity). In the presence of CACNG2 or CACNG4 or CACNG7 or CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of L- glutamate (PubMed:21172611). Resensitization is blocked by CNIH2 through interaction with CACNG8 in the CACNG8-containing AMPA receptors complex (PubMed:21172611). Calcium (Ca(2+)) permeability depends on subunits composition and, heteromeric channels containing edited GRIA2 subunit are calcium-impermeable. Also permeable to other divalents cations such as strontium(2+) and magnesium(2+) and monovalent cations such as potassium(1+) and lithium(1+) (By similarity).

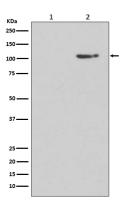
#### **Cellular Location**

Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane {ECO:0000250 | UniProtKB:P19490}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19490}. Postsynaptic cell membrane; Multi-pass membrane protein. Postsynaptic density membrane {ECO:0000250|UniProtKB:P23818}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P23818}. Cell projection, dendrite {ECO:0000250|UniProtKB:P23818}. Cell projection, dendritic spine {ECO:0000250|UniProtKB:P23818}. Early endosome membrane {ECO:0000250|UniProtKB:P19490}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19490}. Recycling endosome membrane {ECO:0000250|UniProtKB:P19490}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P19490}. Presynapse {ECO:0000250|UniProtKB:P23818}. Synapse {ECO:0000250|UniProtKB:P23818} Note=Interaction with CACNG2, CNIH2 and CNIH3 promotes cell surface expression. Colocalizes with PDLIM4 in early endosomes. Displays a somatodendritic localization and is excluded from axons in neurons (By similarity). Localized to cone photoreceptor pedicles (By similarity) {ECO:0000250 | UniProtKB:P19490, ECO:0000250 | UniProtKB:P23818}

#### **Tissue Location**

Widely expressed in brain.

## **Images**



Western blot analysis of Phospho-GluR1 (S845) expression in (1) Human brain lysate treated with Lambda phosphatase lysate; (2) Human brain lysate.

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