

**Phospho-AMPA Receptor 1 (S831) Antibody**  
Rabbit mAb  
Catalog # AP93250

**Specification**

**Phospho-AMPA Receptor 1 (S831) Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P42261</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	GLUR 1; GLUR A; AMPA 1; AMPA selective glutamate receptor 1; GluA1; GLUH1; GluR K1; GLUR1; GLURA; GluRK1; Glutamate receptor 1; Glutamate receptor ionotropic AMPA 1; Glutamate receptor ionotropic; Glutamate receptor, ionotropic, AMPA 1; Gria1; HBGR1;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	101506 Da

**Phospho-AMPA Receptor 1 (S831) Antibody - Additional Information**

Dilution	WB~~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Phospho-AMPA Receptor 1 (S831)
Description	Ionotropic glutamate receptor. 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. The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist.
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.

**Phospho-AMPA Receptor 1 (S831) Antibody - 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:<a href="http://www.uniprot.org/citations/1311100" target="\_blank">1311100</a>, PubMed:<a href="http://www.uniprot.org/citations/20805473" target="\_blank">20805473</a>, PubMed:<a href="http://www.uniprot.org/citations/21172611" target="\_blank">21172611</a>, PubMed:<a href="http://www.uniprot.org/citations/28628100" target="\_blank">28628100</a>, PubMed:<a href="http://www.uniprot.org/citations/35675825" target="\_blank">35675825</a>). 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:<a href="http://www.uniprot.org/citations/21172611" target="\_blank">21172611</a>). Resensitization is blocked by CNIH2 through interaction with CACNG8 in the CACNG8-containing AMPA receptors complex (PubMed:<a href="http://www.uniprot.org/citations/21172611" target="\_blank">21172611</a>). 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.

### Phospho-AMPA Receptor 1 (S831) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Phospho-AMPA Receptor 1 (S831) Antibody - Images