GRIA2 Recombinant Monoclonal Antibody

Product Code	CSB-RA009899A0HU
Abbreviation	Glutamate receptor 2
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P42262
Immunogen	A synthesized peptide derived from human GRIA2
Species Reactivity	Human
Tested Applications	ELISA
Relevance	Receptor for glutamate that functions as ligand-gated ion channel in the central nervous system and plays an important role in excitatory synaptic transmission. 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. In the presence of CACNG4 or CACNG7 or CACNG8, shows resensitization which is characterized by a delayed accumulation of current flux upon continued application of glutamate. Through complex formation with NSG1, GRIP1 and STX12 controls the intracellular fate of AMPAR and the endosomal sorting of the GRIA2 subunit toward recycling and membrane targeting (By similarity).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Glutamate receptor 2, GluR-2, AMPA-selective glutamate receptor 2, GluR-B, GluR-K2, Glutamate receptor ionotropic, AMPA 2, GluA2, GRIA2, GLUR2
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience
Gene Names	GRIA2
Clone No.	4C7
Description	The recombinant GRIA2 antibody production commenced with the obtaining of genes encoding antibody against GRIA2. Antibody genes were obtained by sequencing and screening DNA reversely transcribed from RNA that was

extracted from the B cells isolated from immunized animals. These genes were cloned into plasma vectors and subsequently transfected into a mammalian cell line for production. The product is the recombinant GRIA2 antibody. It underwent purification using affinity-chromatography from the cell culture medium. This recombinant GRIA2 antibody has been validated to detect the GRIA2 protein from Human in the ELISA.

GRIA2 is the encoding gene for the GluA2 subunit, which plays a central role in the modulation of AMPAR properties such as calcium permeability, single-channel conductance, and receptor trafficking at the synapse, as well as synaptic plasticity. When present in the AMPARs, the GluA2 subunit, in its classical postnatally edited form, makes the receptor ion channel impermeable to calcium and insensitive to voltage-dependent blockade by intracellular polyamines, such ad spermine. Reduced expression of the GluA2 subunit in AMPA receptors increases calcium permeability resulting in a lower seizure threshold.