

Product datasheet for **TA301102**

Metabotropic Glutamate Receptor 5 (GRM5) Rabbit Monoclonal Antibody [Clone ID: EPR2425Y]

Product data:

Product Type:	Primary Antibodies
Clone Name:	EPR2425Y
Applications:	IHC, WB
Recommended Dilution:	WB: 1:5000; IHC: 1:250; ICC: 1: 100; FC: 1: 10
Reactivity:	Mouse, Rat, Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Monoclonal
Immunogen:	A synthetic peptide corresponding to residues near the C-terminus of human mGluR5
Formulation:	PBS 49%,Sodium azide 0.01%,Glycerol 50%,BSA 0.05%
Purification:	Tissue culture supernatant
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	132 kDa
Gene Name:	glutamate metabotropic receptor 5
Database Link:	NP_000833 Entrez Gene 24418 Rat Entrez Gene 108071 Mouse Entrez Gene 2915 Human P41594



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Background:

L-glutamate is the major excitatory neurotransmitter in the central nervous system and activates both ionotropic and metabotropic glutamate receptors. Class I metabotropic glutamate receptors (mGluRs) have been postulated to play a role in synaptic plasticity. It has been suggested that mGluR5 may be the primary high affinity ACPD receptor in CA1 neurons (1). Also, neuroprotection by mGluR system has been linked to the modulation of both the free radical nitric oxide (NO) and programmed cell death (PCD). Activation of group I mGluR subtypes utilized an effective, "upstream" mechanism for the inhibition of cysteine protease activity that offered an enhanced level of neuroprotection through both the preservation of genomic DNA integrity and the maintenance of PS membrane asymmetry (2). It has also been shown that activation of mGluRs enhances formation of an mGluR-Homer-PIKE-L complex, leading to activation of PI3 kinase activity and prevention of neuronal apoptosis. Our findings indicate that this complex mediates the well-known ability of agonists of mGluR5 to prevent neuronal apoptosis (3).

Synonyms:

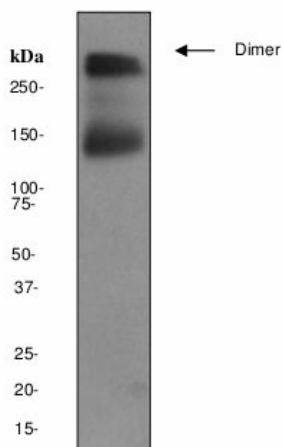
GPRC1E; mGlu5; MGLUR5; PPP1R86

Protein Families:

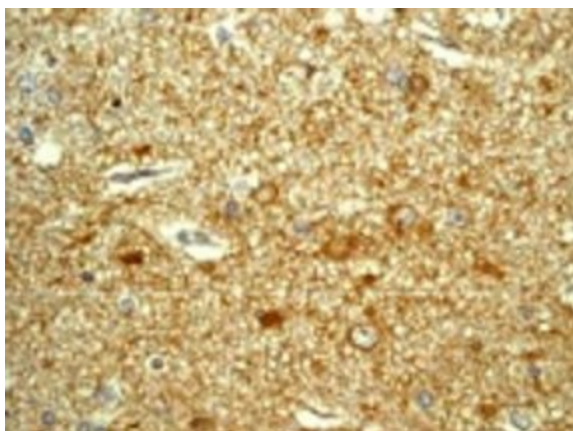
Druggable Genome, GPCR, Transmembrane

Protein Pathways:

Calcium signaling pathway, Gap junction, Huntington's disease, Long-term depression, Long-term potentiation, Neuroactive ligand-receptor interaction

Product images:


Western blot - Metabotropic Glutamate Receptor 5 antibody [EPR2425Y]; Anti-Metabotropic Glutamate Receptor 5 antibody [EPR2425Y] at 1/10000 dilution + mouse brain lysate at 10 ug.Secondary.Goat anti-rabbit-HRP at 1000.developed using the ECL technique.Predicted band size : 132 kDa.Observed band size : 140-150 kDa.Additional bands at : >250 kDa (possible dimer).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Metabotropic Glutamate Receptor 5 antibody [EPR2425Y]; Human brain tissue with TA301102 at 1/250 dilution.