

## Product datasheet for **TA328825**

### Grm1 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	FC, IF, IP, WB
Recommended Dilution:	WB: 1:200-1:2000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)HEGVLNIDDYKIQMNK, corresponding to amino acids 501-516 of rat mGluR1. Extracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN <sub>3</sub> .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	glutamate receptor, metabotropic 1
Database Link:	<a href="#">NP_058707</a> <a href="#">Entrez Gene 2911 Human</a> <a href="#">Entrez Gene 14816 Mouse</a> <a href="#">Entrez Gene 24414 Rat</a> <a href="#">P23385</a>



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**Background:**

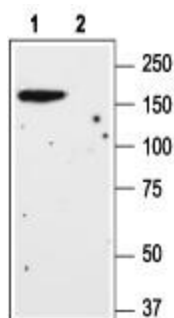
L-Glutamate is the major excitatory neurotransmitter in the central nervous system. It operates through several receptors that are categorized as ionotropic (ligand-gated cation channels) or metabotropic (G-protein coupled receptors). The metabotropic glutamate receptors family includes eight members (mGluR1-8) that have been divided into three groups based on their sequence homology, pharmacology and signal transduction. Group I of the metabotropic glutamate receptors includes the mGluR1 and mGluR5 receptors. The receptors present the typical G-protein coupled receptor (GPCR) signature topology: seven transmembrane domains with a large extracellular N-terminus domain and an intracellular C-terminus one. The N-terminus domain of Group I receptors contains the glutamate binding site while the cytoplasmic C-terminus domain has an important role in the regulation of receptor activity through interactions with other proteins such as the Homer adaptor proteins. mGluR1 and mGluR5 receptors signal through Gq/G11 that activates phospholipase C and ultimately produces an increase in inositol trisphosphate and cytosolic Ca<sup>2+</sup>. More downstream signaling pathways include activation of PKC and modulation of Ca<sup>2+</sup> and K<sup>+</sup> ion channels. Activation of signaling pathways independent of G-proteins has also been reported. mGluR1 is predominantly expressed in nervous tissue although expression in several non-neural cell types has also been described. In the brain it is highly expressed in the hippocampus, cerebellum, olfactory bulb and thalamus. The mGluR1 receptor is involved in several physiological processes such as neuronal development, induction of long-term potentiation (LTP) and depression (LTD) as well as in pathological disorders such as brain trauma, chronic pain, Parkinson's and Huntington's disease.

**Synonyms:**

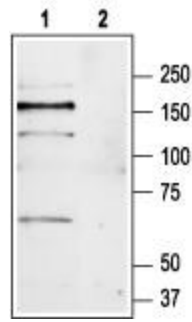
GPRC1A; GRM1A; mGlu1; MGLUR1; MGLUR1A; OTTHUMP00000017365; OTTHUMP00000017366

**Note:**

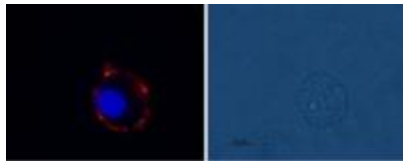
This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

**Product images:**

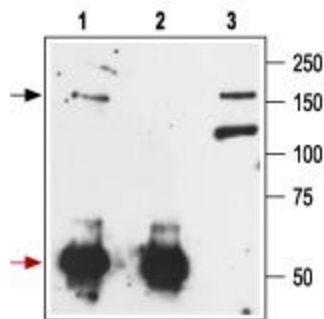
Western blot analysis of rat brain lysate: 1. Anti-mGluR1 (extracellular) antibody, (1:200). 2. Anti-mGluR1 (extracellular) antibody, preincubated with the control peptide antigen.



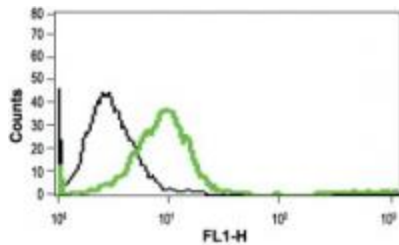
Western blot analysis of mouse brain lysate: 1. Anti-mGluR1 (extracellular) antibody, (1:200). 2. Anti-mGluR1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of mGluR1 in rat C6 glioma cells. Immunocytochemical staining of live intact rat C6 glioma cells using Anti-mGluR1 (extracellular) antibody, (1:100), followed by goat-anti-rabbit-AlexaFluor-555 secondary antibody (red). Nuclei were stained with Hoechst 33342 (blue).



Immunoprecipitation of rat brain lysate: 1. Cell lysate + protein A beads + Anti-mGluR1 (extracellular) antibody. 2. Cell lysate + protein A beads + pre-immune rabbit serum. 3. Cell lysate. Black arrow indicates the mGluR1 protein (glycosylated form) while the red arrow shows the IgG heavy chain. Immunoblot was performed with the Anti-mGluR1 (extracellular) antibody.



Indirect flow cytometry analysis in live intact Jurkat cells: black line, Unstained cells + goat-anti-rabbit-FITC. green line, Cells + Anti-mGluR1 (extracellular) antibody, (10 ug) + goat-anti-rabbit-FITC.