

Product datasheet for **TA328833**

Grm7 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide TISGSKKEDTDRKC, corresponding to amino acid residues 377-390 of rat mGluR7 . 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, 0.05% NaN ₃ .
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 metabotropic receptor 7
Database Link:	NP_112302 Entrez Gene 2917 Human Entrez Gene 108073 Mouse Entrez Gene 81672 Rat P35400



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Background:

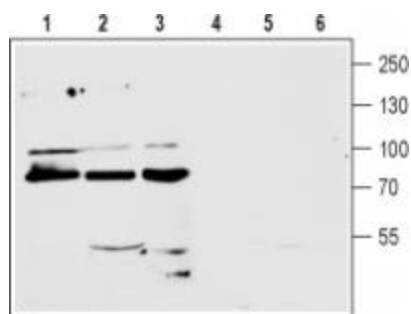
Metabotropic glutamate receptors (mGluRs) belong to the super family of G-protein coupled receptors (seven transmembrane proteins). mGluRs are further divided into subfamilies: group I mGluRs (mGluR1 and mGluR5) which couple to Gq, thereby activating phospholipase C (PLC). Group II which include mGluR2 and mGluR3 couple to Gi, therefore inhibit the formation of adenylate cyclase. mGluR4, 6, 7, 8 which belong to group III also inhibit adenylate cyclase formation by coupling to Gi. The C-terminus of these receptors has important functions in modulating their activity. This region is important for G-protein coupling, post-translational modifications like phosphorylation as well as protein-protein interactions. The C-terminal region is also subject to alternative splicing. Indeed, mGluR7 can be detected as five different splice variants. Like all group III metabotropic glutamate receptors, mGluR7 is localized presynaptically. It is highly expressed in the central nervous system and could also be detected in some peripheral organs like hair cells and spiral ganglion cells of the inner ear. As opposed to other group III metabotropic glutamate receptors, mGluR7 has very low affinity for its substrate L-glutamate, therefore, only under high synaptic activity is the receptor active. This enables the receptor to act as a negative feedback loop by inhibiting the release of L-glutamate. mGluR7 may play a molecular role in the pathways leading to emotion and cognition.

Synonyms:

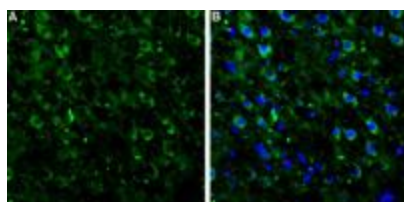
FLJ40498; GLUR7; GPRC1G; mGlu7; MGLUR7

Note:

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

Product images:

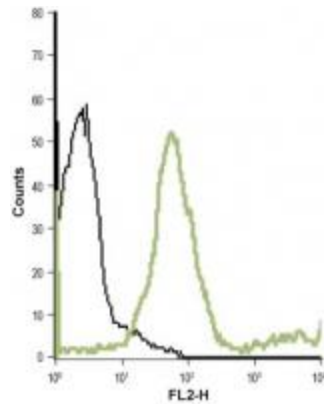
Western blot analysis of mouse (lanes 1 and 4) and rat (lanes 2 and 5) brain membranes and human CCF-STTG1 astrocytoma (lanes 3 and 6) cell line lysate (1:200): 1-3. Anti-mGluR7 (extracellular) antibody, (1:200). 4-6. Anti-mGluR7 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of mGluR7 in rat neocortex. Immunohistochemical staining of rat neocortex frozen sections using Anti-mGluR7 (extracellular) antibody. A. mGluR7 staining (green) appears in several neocortical neurons. B. Merge image showing mGluR7 staining together with cell nuclei (blue).



Expression of mGluR7 in rat PC12 cells. Immunocytochemical staining of live intact rat pheochromocytoma PC12 cells. A. Cells were stained with Anti-mGluR7 (extracellular) antibody, (1:100), followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Live view of the cells. C. Merge of the two pictures.



Indirect flow cytometry analysis of live intact human T cell leukemia (Jurkat) cell line: black line, Unstained cells + goat-anti-rabbit-PE. green line, Cells + Anti-mGluR7 (extracellular) antibody, (1:20) + goat-anti-rabbit-PE.