



Monoclonal Anti-human mGluR2 Antibody

ORDERING INFORMATION

Catalog Number: MAB4676

Clone: 455310

Lot Number: CAFJ01

Size: 100 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: human mGluR2

Immunogen: NS0-derived rhmGluR2

Ig class: mouse IgG_{2b}

Recommended Applications:

Flow cytometry
Western blot

Other Application:

Direct ELISA

Background

Metabotropic glutamate receptor 2 (mGluR2) is an 872 aa, predicted 96 kDa multipass G protein coupled inhibitory receptor belonging to group II of the metabotropic glutamate receptor family. It is localized largely on the presynaptic side of glutamatergic and other neurotransmitter synapses in areas of the forebrain. mGluR2 activity is potentially involved in some anxiety disorders. The long N-terminal extracellular region of human mGluR2 (aa 1 - 498) shares 97% aa identity with either mouse or rat mGluR2.

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, NS0-derived, recombinant human mGluR2 (rhGluR2; aa 19 - 498; Accession # Q14416). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody detects rhmGluR2 in direct ELISAs and Western blots. In these applications, this antibody shows no cross-reactivity with the N-terminal regions of rhmGluR1, -3, -4, -5, -7, or -8.

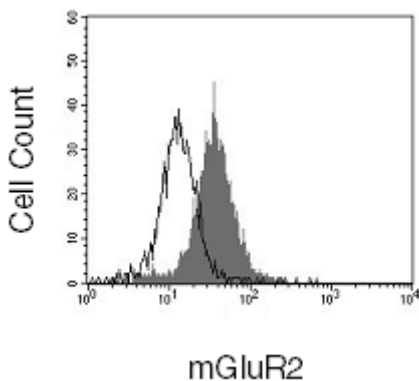
Applications

Flow cytometry - This antibody was tested for flow cytometry using U118MG cells. For intracellular staining to detect mGluR2, cells must first be fixed and permeabilized using 4% paraformaldehyde and 0.1% saponin in PBS. Dilute this antibody to 25 µg/mL and add 10 µL of the diluted solution to 1 - 5 x 10⁵ cells in a total reaction volume not exceeding 200 µL. The binding of unlabeled monoclonal antibodies may be visualized by adding a secondary developing reagent such as anti-mouse IgG conjugated to a fluorochrome.

Western blot - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human mGluR2. Using a colorimetric detection system, the detection limit for rhmGluR2 is approximately 10 ng/lane under non-reducing and reducing conditions. Chemiluminescent detection with WesternGlo™ Chemiluminescent Detection Substrate (R&D Systems, Catalog # AR004) will increase sensitivity by 5 to 50 fold.

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human mGluR2. The detection limit for rhmGluR2 is approximately 1 ng/well.

Optimal dilutions should be determined by each laboratory for each application.



U118MG cells were stained with anti-mGluR2 (R&D Systems, Cat. # MAB4676) or isotype control (R&D Systems, Cat. # MAB0041, open histogram) followed by APC-conjugated anti-mouse antibody (R&D Systems, Cat. # F0101B).

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