

# mGluR-2 (H-130): sc-99041

## BACKGROUND

The mGluR proteins (metabotropic glutamate receptors) are members of the G protein-coupled receptor family and are functionally and pharmacologically distinct from the GluR proteins (ionotropic glutamate receptors). The eight currently known mGluR proteins are mediated by two G proteins with opposing regulation of adenylate cyclase pathways. The activities of mGluR-1 and mGluR-5 are mediated by a G protein that activates a phosphatidylinositol-calcium second messenger system and generates a calcium-activated chloride current. The remainder of the eight subtypes of mGluR have an activity mediated by a G protein that inhibits adenylate cyclase activity. mGluR-2, which may interact with GRASP, acts as a receptor for glutamate. It may also be involved in the regulation of neurotransmission suppression and in synaptogenesis or synaptic stabilization.

## REFERENCES

1. Flor, P.J., et al. 1995. Molecular cloning, functional expression and pharmacological characterization of the human metabotropic glutamate receptor type 2. *Eur. J. Neurosci.* 7: 622-629.
2. Kammermeier, P.J. and Yun, J. 2005. Activation of metabotropic glutamate receptor 1 dimers requires glutamate binding in both subunits. *J. Pharmacol. Exp. Ther.* 312: 502-508.
3. Sarría, R., et al. 2005. Immunocytochemical localization of metabotropic (mGluR-2/-3 and mGluR-4a) and ionotropic (GluR-2/-3) glutamate receptors in adrenal medullary ganglion cells. *Histol. Histopathol.* 21: 141-147.
4. Yoshimizu, T., et al. 2006. An mGluR-2/-3 antagonist, MGS0039, exerts antidepressant and anxiolytic effects in behavioral models in rats. *Psychopharmacology* 186: 587-593.
5. Nicholls, R.E., et al. 2006. mGluR-2 long-term plasticity at hippocampal mossy fiber-CA3 synapses. *Proc. Natl. Acad. Sci. USA* 103: 6380-6385.
6. Lee, Y., et al. 2006. The mGlu2/3 receptor agonist LY354740 suppresses immobilization stress-induced increase in rat prefrontal cortical BDNF mRNA expression. *Neurosci. Lett.* 398: 328-332.
7. Pacheco Otalora, L.F., et al. 2006. Abnormal mGluR-2/-3 expression in the perforant path termination zones and mossy fibers of chronically epileptic rats. *Brain Res.* 1098: 170-185.
8. Alexander, G.M. and Godwin, D.W. 2006. Metabotropic glutamate receptors as a strategic target for the treatment of epilepsy. *Epilepsy Res.* 71: 1-22.

## CHROMOSOMAL LOCATION

Genetic locus: GRM2 (human) mapping to 3p21.2; Grm2 (mouse) mapping to 9 F1.

## SOURCE

mGluR-2 (H-130) is a rabbit polyclonal antibody raised against amino acids 407-536 mapping within an internal region of mGluR-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

mGluR-2 (H-130) is recommended for detection of mGluR-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

mGluR-2 (H-130) is also recommended for detection of mGluR-2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for mGluR-2 siRNA (h): sc-61028, mGluR-2 siRNA (m): sc-61029, mGluR-2 shRNA Plasmid (h): sc-61028-SH, mGluR-2 shRNA Plasmid (m): sc-61029-SH, mGluR-2 shRNA (h) Lentiviral Particles: sc-61028-V and mGluR-2 shRNA (m) Lentiviral Particles: sc-61029-V.

Molecular Weight of mGluR-2: 110/220 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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