

# mGluR-8a/b/c (H-40): sc-99046

## 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 sub-types of mGluR have an activity mediated by a G protein that inhibits adenylate cyclase activity. GLuR-8 is a group III metabotropic glutamate receptor. In response to glutamate stimulation, GLuR-8 activates GTP-binding proteins that modulate second-messenger cascades. Alternative splicing of this integral membrane protein produces three isoforms: a, b and c. Human GLuR-8 maps to q31.33 of chromosome 7.

## REFERENCES

1. Scherer, S., et al. 1996. Localization of two metabotropic glutamate receptor genes, GRM3 and GRM8, to human chromosome 7q. *Genomics* 2: 230-233.
2. Online Mendelian Inheritance in Man, OMIM™. 1996. Johns Hopkins University, Baltimore, MD. MIM Number: 601116. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Scherer, S. et al. 1997. The human metabotropic glutamate receptor 8 (GRM8) gene: a disproportionately large gene located at 7q31.3-q32.1. *Genomics* 2: 232-236.
4. Takaki, H., et al. 2004. Positive associations of polymorphisms in the metabotropic glutamate receptor type 8 gene (GRM8) with schizophrenia. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 128B: 6-14.
5. Cull-Candy, S.G., et al. 2004. Role of distinct NMDA receptor subtypes at central synapses. *Sci. STKE* 255: re16.
6. Jayakar, S.S., et al. 2004. AMPA receptor regulation mechanisms: future target for safer neuroprotective drugs. *Int. J. Neurosci.* 114: 695-734.
7. SWISS-PROT/TrEMBL (O00222). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

## CHROMOSOMAL LOCATION

Genetic locus: GRM8 (human) mapping to 7q31.33; Grm8 (mouse) mapping to 6 A3.1.

## SOURCE

mGluR-8a/b/c (H-40) is a rabbit polyclonal antibody raised against amino acids 360-399 mapping within an internal region of mGluR-8 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.

## STORAGE

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

## APPLICATIONS

mGluR-8a/b/c (H-40) is recommended for detection of mGluR-8a/b/c 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); may cross-react with mGluR-4.

mGluR-8a/b/c (H-40) is also recommended for detection of mGluR-8a/b/c in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for mGluR-8a/b/c siRNA (h): sc-61040, mGluR-8a/b/c siRNA (m): sc-61041, mGluR-8a/b/c shRNA Plasmid (h): sc-61040-SH, mGluR-8a/b/c shRNA Plasmid (m): sc-61041-SH, mGluR-8a/b/c shRNA (h) Lentiviral Particles: sc-61040-V and mGluR-8a/b/c shRNA (m) Lentiviral Particles: sc-61041-V.

Molecular Weight of mGluR-8a/b/c: 102 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.

## 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.



Try **mGluR-8 (4A7): sc-517124**, our highly recommended monoclonal alternative to mGluR-8a/b/c (H-40).