

mGluR-8a/b/c (K-15): sc-47158

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 mGluR1 and mGluR5 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. 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 7q31.33 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* 2004: 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 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain 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.

Blocking peptide available for competition studies, sc-47158 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

mGluR-8a/b/c (K-15) 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), 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-8a/b/c (K-15) 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **mGluR-8 (4A7): sc-517124**, our highly recommended monoclonal alternative to mGluR-8a/b/c (K-15).