

mGluR-8 (4A7): sc-517124

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* 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-8 (4A7) is a mouse monoclonal antibody raised against amino acids 486-575 representing partial length mGluR-8 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml 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-8 (4A7) is recommended for detection of mGluR-8 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

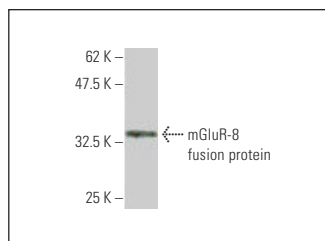
Suitable for use as control antibody for mGluR-8a/b/c siRNA (h): sc-61040, mGluR-8a/b/c siRNA (m): sc-61041, mGluR-8a/b/c shRNA Plasmid (h): sc-61040-SH, mGluR-8a/b/c shRNA Plasmid (m): sc-61041-SH, mGluR-8a/b/c shRNA (h) Lentiviral Particles: sc-61040-V and mGluR-8a/b/c shRNA (m) Lentiviral Particles: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

Molecular Weight of mGluR-8: 102 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

DATA



mGluR-8 (4A7): sc-517124. Western blot analysis of human recombinant mGluR-8 fusion protein.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.