SANTA CRUZ BIOTECHNOLOGY, INC.

mGluR-6 (1A11): sc-517076

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 sub-types of mGluR have an activity mediated by a G-protein that inhibits adenylate cyclase activity. mGluR-6 is expressed in the synapses of bipolar cell dendrites. This receptor is involved in mediating synaptic transmission from rod and cone photoreceptors to other neurons.

REFERENCES

1. Hashimoto, T., et al. 1997. The whole nucleotide sequence and chromosomal localization of the gene for human metabotropic glutamate receptor subtype 6. Eur. J. Neurosci. 9: 1226-1235.
2. Dryja, T.P., et al. 2005. Night blindness and abnormal cone electroretinogram ON responses in patients with mutations in the GRM6 gene encoding mGluR6. Proc. Natl. Acad. Sci. USA 102: 4884-4889.
3. Zeitz, C., et al. 2005. Mutations in GRM6 cause autosomal recessive congenital stationary night blindness with a distinctive scotopic 15-Hz flicker electroretinogram. Invest. Ophthalmol. Vis. Sci. 46: 4328-4335.
4. Yang, Z.Q. 2005. Agonists and antagonists for group III metabotropic glutamate receptors 6, 7 and 8. Curr. Top. Med. Chem. 5: 913-918.
5. Dryja, T.P., et al. 2005. Night blindness and abnormal cone electroretinogram ON responses in patients with mutations in the GRM6 gene encoding mGluR-6. Proc. Natl. Acad. Sci. USA 102: 4884-4889.
6. O'Connor, E., et al. 2006. Congenital stationary night blindness associated with mutations in GRM6 encoding glutamate receptor MGluR6. Br. J. Ophthalmol. 90: 653-654.

CHROMOSOMAL LOCATION

Genetic locus: GRM6 (human) mapping to 5q35.3.

SOURCE

mGluR-6 (1A11) is a mouse monoclonal antibody raised against amino acids 477-566 representing partial length mGluR-6 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain 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-6 (1A11) is recommended for detection of mGluR-6 of 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-6 siRNA (h): sc-61036, mGluR-6 shRNA Plasmid (h): sc-61036-SH and mGluR-6 shRNA (h) Lentiviral Particles: sc-61036-V.

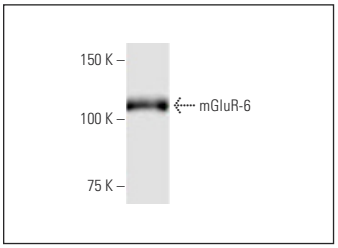
Molecular Weight of mGluR-6: 190 kDa.

Positive Controls: human spleen extract: sc-363779.

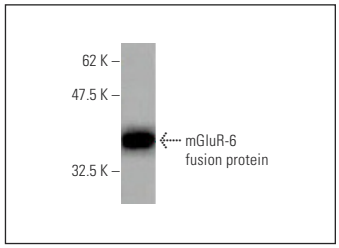
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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-6 (1A11): sc-517076. Western blot analysis of mGluR-6 expression in human spleen tissue extract.



mGluR-6 (1A11): sc-517076. Western blot analysis of human recombinant mGluR-6 fusion protein.

SELECT PRODUCT CITATIONS

1. Liu, L.F., et al. 2023. Inhibiting 5-hydroxytryptamine receptor 3 alleviates pathological changes of a mouse model of Alzheimer's disease. Neural Regen. Res. 18: 2019-2028.

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.