

mGluR-4 (B-8): sc-376485

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-4, which can interact with PRKCABP, acts as a receptor for glutamate. It is highly expressed in cerebellum.

CHROMOSOMAL LOCATION

Genetic locus: GRM4 (human) mapping to 6p21.31; Grm4 (mouse) mapping to 17 A3.3.

SOURCE

mGluR-4 (B-8) is a mouse monoclonal antibody raised against amino acids 364-403 mapping within an internal region of mGluR-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

mGluR-4 (B-8) is available conjugated to agarose (sc-376485 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376485 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376485 PE), fluorescein (sc-376485 FITC), Alexa Fluor® 488 (sc-376485 AF488), Alexa Fluor® 546 (sc-376485 AF546), Alexa Fluor® 594 (sc-376485 AF594) or Alexa Fluor® 647 (sc-376485 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376485 AF680) or Alexa Fluor® 790 (sc-376485 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

mGluR-4 (B-8) is recommended for detection of mGluR-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-4 (B-8) is also recommended for detection of mGluR-4 in additional species, including bovine and porcine.

Suitable for use as control antibody for mGluR-4 siRNA (h): sc-61032, mGluR-4 siRNA (m): sc-61033, mGluR-4 shRNA Plasmid (h): sc-61032-SH, mGluR-4 shRNA Plasmid (m): sc-61033-SH, mGluR-4 shRNA (h) Lentiviral Particles: sc-61032-V and mGluR-4 shRNA (m) Lentiviral Particles: sc-61033-V.

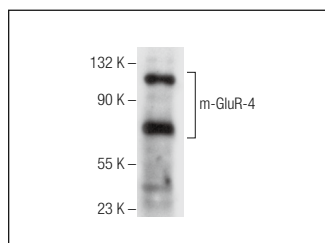
Molecular Weight of mGluR-4: 110 kDa.

Positive Controls: rat cerebellum extract: sc-2398 or mouse brain extract: sc-2253.

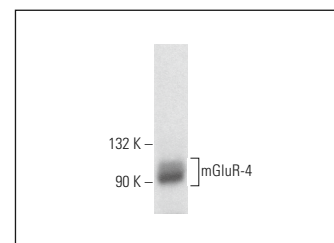
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



mGluR-4 (B-8): sc-376485. Western blot analysis of mGluR-4 expression in rat cerebellum tissue extract.



mGluR-4 (B-8): sc-376485. Western blot analysis of mGluR-4 expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

1. Lopez, J.P., et al. 2014. MiR-1202 is a primate-specific and brain-enriched microRNA involved in major depression and antidepressant treatment. *Nat. Med.* 20: 764-768.
2. Li, J., et al. 2015. MiR-335 is involved in major depression disorder and antidepressant treatment through targeting GRM4. *Neurosci. Lett.* 606: 167-172.
3. Wang, S., et al. 2016. Expression of metabotropic glutamate receptor 4 in osteosarcoma. *Mol. Clin. Oncol.* 4: 65-69.
4. Lozachmeur, G., et al. 2023. Three-dimensional molecular cartography of human cerebral organoids revealed by double-barcoded spatial transcriptomics. *Cell Rep. Methods* 3: 100573.

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 for detailed protocols and support products.

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