

# mGluR-2 (A-7): sc-271655

## 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-2, which may interact with GRASP, acts as a receptor for glutamate. It may also be involved in the regulation of neurotransmission suppression and in synaptogenesis or synaptic stabilization.

## CHROMOSOMAL LOCATION

Genetic locus: GRM2 (human) mapping to 3p21.2; Grm2 (mouse) mapping to 9 F1.

## SOURCE

mGluR-2 (A-7) is a mouse monoclonal antibody raised against amino acids 407-536 mapping within an internal region of mGluR-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

mGluR-2 (A-7) is available conjugated to agarose (sc-271655 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271655 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271655 PE), fluorescein (sc-271655 FITC), Alexa Fluor® 488 (sc-271655 AF488), Alexa Fluor® 546 (sc-271655 AF546), Alexa Fluor® 594 (sc-271655 AF594) or Alexa Fluor® 647 (sc-271655 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271655 AF680) or Alexa Fluor® 790 (sc-271655 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

mGluR-2 (A-7) is recommended for detection of mGluR-2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for mGluR-2 siRNA (h): sc-61028, mGluR-2 siRNA (m): sc-61029, mGluR-2 shRNA Plasmid (h): sc-61028-SH, mGluR-2 shRNA Plasmid (m): sc-61029-SH, mGluR-2 shRNA (h) Lentiviral Particles: sc-61028-V and mGluR-2 shRNA (m) Lentiviral Particles: sc-61029-V.

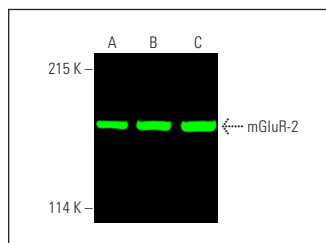
Molecular Weight of mGluR-2: 110/220 kDa.

Positive Controls: LNCaP cell lysate: sc-2231, IMR-32 cell lysate: sc-2409 or SH-SY5Y cell lysate: sc-3812.

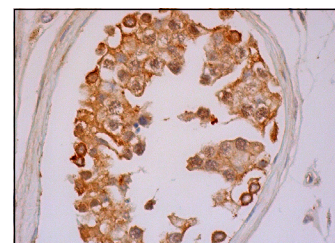
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



mGluR-2 (A-7): sc-271655. Near-Infrared western blot analysis of mGluR-2 expression in LNCaP (A), IMR-32 (B) and SH-SY5Y (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



mGluR-2 (A-7): sc-271655. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts.

## SELECT PRODUCT CITATIONS

- Dunn, H.A., et al. 2019. ELFN2 is a postsynaptic cell adhesion molecule with essential roles in controlling group III mGluRs in the brain and neuropsychiatric behavior. *Mol. Psychiatry* 24: 1902-1919.
- Zhao, D., et al. 2020. PCB52 exposure alters the neurotransmission ligand-receptors in male offspring and contributes to sex-specific neurodevelopmental toxicity. *Environ. Pollut.* 264: 114715.
- Bagheri, J., et al. 2023. Maternal diabetes decreases the expression of GABAAα1, GABAB1, and mGlu2 receptors in the visual cortex of male rat neonates. *Neurosci. Lett.* 809: 137309.
- Milczarek, M.M., et al. 2024. Impairments in the early consolidation of spatial memories via group II mGluR agonism in the mammillary bodies. *Sci. Rep.* 14: 5977.

## 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.

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