

GRIN2 (P-14): sc-164544

BACKGROUND

G protein-coupled receptors (GPCRs) represent a large superfamily of cell-surface receptors that are involved in a multitude of physiological processes such as perception of sensory information, modulation of synaptic transmission, hormone release/actions, regulation of cell contraction/migration and cell growth/differentiation. GPCRs interact with G proteins (heterotrimeric GTPases) to synthesize intracellular second messengers, such as diacylglycerol, cyclic AMP, inositol phosphates and calcium ions. Their diverse biological functions range from vision and olfaction to neuronal and endocrine signaling and are involved in many pathological conditions. GRIN2 (G protein-regulated inducer of neurite outgrowth 2), also known as GPRIN2, is a 458 amino acid protein that is expressed in cerebellum and is thought to play a role in neurite outgrowth. GRIN2 interacts with activated G_{αo} and G_{αi} and is encoded by a gene that maps to human chromosome 10q11.22.

REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 31-39.
2. Chen, L.T., et al. 1999. A candidate target for G protein action in brain. J. Biol. Chem. 274: 26931-26938.
3. Iida, N., et al. 2004. Identification and biochemical analysis of GRIN1 and GRIN2. Meth. Enzymol. 390: 475-483.
4. Deloukas, P., et al. 2004. The DNA sequence and comparative analysis of human chromosome 10. Nature 429: 375-381.
5. Sudmant, P.H., et al. 2010. Diversity of human copy number variation and multicopy genes. Science 330: 641-646.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2010. Johns Hopkins University, Baltimore, MD. MIM Number: 611240. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: GPRIN2 (human) mapping to 10q11.22; Gprin2 (mouse) mapping to 14 B.

SOURCE

GRIN2 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GRIN2 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-164544 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GRIN2 (P-14) is recommended for detection of GRIN2 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); non cross-reactive with other GRIN family members.

Suitable for use as control antibody for GRIN2 siRNA (h): sc-90622, GRIN2 siRNA (m): sc-145766, GRIN2 shRNA Plasmid (h): sc-90622-SH, GRIN2 shRNA Plasmid (m): sc-145766-SH, GRIN2 shRNA (h) Lentiviral Particles: sc-90622-V and GRIN2 shRNA (m) Lentiviral Particles: sc-145766-V.

Molecular Weight of GRIN2: 47 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.

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.