

GRIN3 (V-14): sc-164548

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/action, 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. GRIN3 (G protein-regulated inducer of neurite outgrowth 3), also known as GPRIN3, is a 776 amino acid protein that contains a C-terminal region which shares a high homology with GRIN2 and GRIN1, and may function in neurite outgrowth.

REFERENCES

1. Strathmann, M., et al. 1989. Diversity of the G-protein family: sequences from five additional α subunits in the mouse. *Proc. Natl. Acad. Sci. USA* 86: 7407-7409.
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. Nakata, H., et al. 2005. Functional characterization of $G_{\alpha o}$ signaling through G protein-regulated inducer of neurite outgrowth 1. *Mol. Pharmacol.* 67: 695-702.
5. Mejía-Guerra, M.K., et al. 2005. In silico identification of regulatory elements of GRIN1 genes. *OMICS* 9: 106-115.
6. Masuho, I., et al. 2008. Dynamic expression patterns of G protein-regulated inducer of neurite outgrowth 1 (GRIN1) and its colocalization with $G_{\alpha o}$ implicate significant roles of $G_{\alpha o}$ -GRIN1 signaling in nervous system. *Dev. Dyn.* 237: 2415-2429.
7. Ge, X., et al. 2009. GRIN1 regulates micro-opioid receptor activities by tethering the receptor and G protein in the lipid raft. *J. Biol. Chem.* 284: 36521-36534.

CHROMOSOMAL LOCATION

Genetic locus: GPRIN3 (human) mapping to 4q22.1; Gprin3 (mouse) mapping to 6 B3.

SOURCE

GRIN3 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GRIN3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164548 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GRIN3 (V-14) is recommended for detection of GRIN3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with GRIN1 or GRIN2.

Suitable for use as control antibody for GRIN3 siRNA (h): sc-88979, GRIN3 siRNA (m): sc-145767, GRIN3 shRNA Plasmid (h): sc-88979-SH, GRIN3 shRNA Plasmid (m): sc-145767-SH, GRIN3 shRNA (h) Lentiviral Particles: sc-88979-V and GRIN3 shRNA (m) Lentiviral Particles: sc-145767-V.

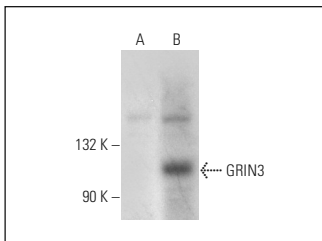
Molecular Weight of GRIN3: 82 kDa.

Positive Controls: GRIN3 (h): 293T Lysate: sc-372928.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



GRIN3 (V-14): sc-164548. Western blot analysis of GRIN3 expression in non-transfected: sc-117752 (A) and human GRIN3 transfected: sc-372928 (B) 293T whole cell lysates.

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 or our catalog for detailed protocols and support products.