SANTA CRUZ BIOTECHNOLOGY, INC.

GFRα-3 (V-19): sc-9340

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glial cell line-derived neurotrophic factor (GDNF) and the related neurotrophic factor neurturin (NTN) are potent survival factors for central and peripheral neurons. GDNF is a glycosylated, disulfide-bonded homodimer that is distantly related to the TGFβ superfamily of growth factors. Three receptors for these factors, GFRα-1 (also designated GDNFR-α, RETL1 or TrnR-1), GFRα-2 (also designated GDNFR-β, RETL2, NTNR-α or TrnR-2) and GFRα-3 have been identified. The receptors do not contain transmembrane domains and are attached to the cell membrane by glycosyl-phosphoinositol linkage. Both GFRα-1 and GFRα-2 have been shown to mediate the GDNF-dependent and NTN-dependent phosphorylation and activation of the tyrosine kinase Ret. GFRα-3 is expressed only during development.

REFERENCES

1. Lin, L.F., et al 1993. GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic neurons. Science 260: 1130-1132.
2. Jing, S., et al. 1996. GDNF-induced activation of the Ret protein tyrosine kinase is mediated by GDNFR-α, a novel receptor for GDNF. Cell 85: 1113-1124.

CHROMOSOMAL LOCATION

Genetic locus: GFRA3 (human) mapping to 5q31.2; Gfra3 (mouse) mapping to 18 B1.

SOURCE

GFRα-3 (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GFRα-3 of mouse 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-9340 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GFRα-3 (V-19) is recommended for detection of GFRα-3 of mouse, rat and 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)], 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).

GFRα-3 (V-19) is also recommended for detection of GFRα-3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for GFRα-3 siRNA (h): sc-41972, GFRα-3 siRNA (m): sc-41973, GFRα-3 shRNA Plasmid (h): sc-41972-SH, GFRα-3 shRNA Plasmid (m): sc-41973-SH, GFRα-3 shRNA (h) Lentiviral Particles: sc-41972-V and GFRα-3 shRNA (m) Lentiviral Particles: sc-41973-V.

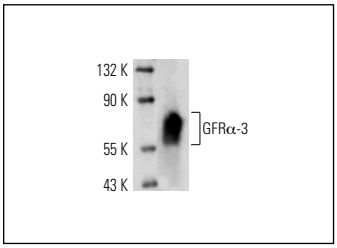
Molecular Weight of glycosylated GFRα-3: 43-62 kDa.

Positive Controls: rat small intestine extract: sc-364811.

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



GFRα-3 (V-19): sc-9340. Western blot analysis of GFRα-3 expression in rat small intestine tissue extract.

SELECT PRODUCT CITATIONS

1. Serra, M.P., et al. 2005. Ret, GFRα-1, GFRα-2 and GFRα-3 receptors in the human hippocampus and fascia dentata. Int. J. Dev. Neurosci. 23: 425-438.
2. Quartu, M., et al. 2007. Tissue distribution of Ret, GFRα-1, GFRα-2 and GFRα-3 receptors in the human brainstem at fetal, neonatal and adult age. Brain Res. 1173: 36-52.
3. Lucini, C., et al. 2008. Cellular localization of GDNF and its GFRα1/RET receptor complex in the developing pancreas of cat. J. Anat. 213: 565-572.

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.