SANTA CRUZ BIOTECHNOLOGY, INC.

GFRα-3 (J135): sc-74047

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.
3. Treanor, J.J., et al. 1996. Characterization of a multi-component receptor for GDNF. Nature 382: 80-83.
4. Kotzbauer, P.T., et al. 1996. Neurturin, a relative of glial-cell-line-derived neurotrophic factor. Nature 384: 467-470.
5. Baloh, R.H., et al. 1997. TrnR2, a novel receptor that mediates neurturin and GDNF signaling through Ret. Neuron 18: 793-802.
6. Naveilhan, P., et al. 1998. Expression and regulation of GFRα-3, a glial cell line-derived neurotrophic factor family receptor. Proc. Natl. Acad. Sci. USA 95: 1295-1300.

CHROMOSOMAL LOCATION

Genetic locus: GFRA3 (human) mapping to 5q31.2.

SOURCE

GFRα-3 (J135) is a mouse monoclonal antibody raised against a protein lacking the C-terminal domain of GFRα-3 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

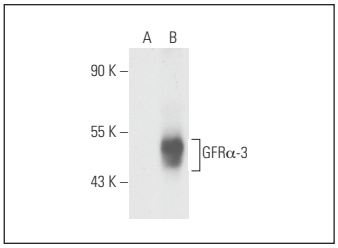
GFRα-3 (J135) is recommended for detection of GFRα-3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for GFRα-3 siRNA (h): sc-41972, GFRα-3 shRNA Plasmid (h): sc-41972-SH and GFRα-3 shRNA (h) Lentiviral Particles: sc-4197.

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

Positive Controls: GFRα-3 (h3): 293T Lysate: sc-176344 or A-673 cell lysate: sc-2414.

DATA



GFRα-3 (J135): sc-74047. Western blot analysis of GFRα-3 expression in non-transfected: sc-117752 (**A**) and human GFRα-3 transfected: sc-176344 (**B**) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.