

GFR α -3 (C-3): sc-398618

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 TGF β superfamily of growth factors. Three receptors for these factors, GFR α -1 (also designated GDNFR- α , RETL1 or TrnR-1), GFR α -2 (also designated GDNFR- β , RETL2, NTNR- α or TrnR-2) and GFR α -3 have been identified. The receptors do not contain transmembrane domains and are attached to the cell membrane by glycosyl-phosphoinositol linkage. Both GFR α -1 and GFR α -2 have been shown to mediate the GDNF-dependent and NTN-dependent phosphorylation and activation of the tyrosine kinase Ret. GFR α -3 is expressed only during development.

REFERENCES

- Lin, L.F., et al. 1993. GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic neurons. *Science* 260: 1130-1132.
- 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.
- Treanor, J.J., et al. 1996. Characterization of a multi-component receptor for GDNF. *Nature* 382: 80-83.

CHROMOSOMAL LOCATION

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

SOURCE

GFR α -3 (C-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 33-59 at the N-terminus of GFR α -3 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GFR α -3 (C-3) is available conjugated to agarose (sc-398618 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398618 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398618 PE), fluorescein (sc-398618 FITC), Alexa Fluor[®] 488 (sc-398618 AF488), Alexa Fluor[®] 546 (sc-398618 AF546), Alexa Fluor[®] 594 (sc-398618 AF594) or Alexa Fluor[®] 647 (sc-398618 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398618 AF680) or Alexa Fluor[®] 790 (sc-398618 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398618 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

GFR α -3 (C-3) is recommended for detection of GFR α -3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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

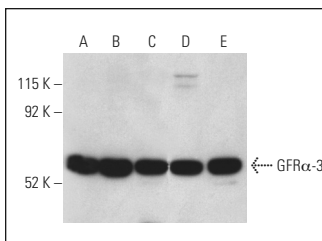
Molecular Weight of glycosylated GFR α -3: 43-62 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, Hep G2 cell lysate: sc-2227 or A-673 cell lysate: sc-2414.

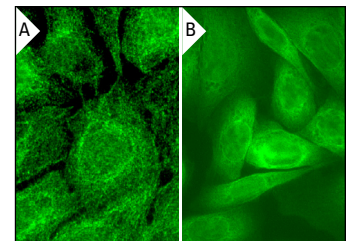
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



GFR α -3 (C-3) HRP: sc-398618 HRP. Direct western blot analysis of GFR α -3 expression in A-673 (A), SH-SY5Y (B), C6 (C), Hep G2 (D) and KNRK (E) whole cell lysates.



GFR α -3 (C-3): sc-398618. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization (A). GFR α -3 (C-3) Alexa Fluor[®] 488: sc-398618 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane localization. Blocked with UltraCruz[®] Blocking Reagent: sc-516214 (B).

SELECT PRODUCT CITATIONS

- Romero-Trejo, D., et al. 2021. The systemic administration of neural stem cells expressing an inducible and soluble form of growth arrest specific 1 inhibits mammary gland tumor growth and the formation of metastases. *Cytherapy* 23: 223-235.

RESEARCH USE

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