GFRα-1 (h2): 293T Lysate: sc-159194



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 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., Doherty, D.H., Lile, J.D., Bektesh, S. and Collins, F. 1993. GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic neurons. Science 260: 1130-1132.
- 2. Jing, S., Wen, D., Yu, Y., Holst, P.L., Luo, Y., Fang, M., Tamir, R., Antonio, L., Hu, Z., Cupples, R., Louis, J.C., Hu, S., Altrock, B.W. and Fox, G.M. 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., Goodman, L., de Sauvage, F., Stone, D.M., Poulsen, K.T., Beck, C.D., Gray, C., Armanini, M.P., Pollock, R.A., Hefti, F., Phillips, H.S., Goddard, A., Moore, M.W., Buj-Bello, A., Davies, A.M., Asai, N., Takahashi, M., Vandlen, R., Henderson, C.E. and Rosenthal, A. 1996. Characterization of a multi-component receptor for GDNF. Nature 382: 80-83.
- Kotzbauer, P.T., Lampe, P.A., Heuckeroth, R.O., Golden, J.P., Creedon, D.J., Johnson, E.M., Jr. and Milbrandt, J. 1996. Neurturin, a relative of glial-cellline-derived neurotrophic factor. Nature 384: 467-470.
- Baloh, R.H., Tansey, M.G., Golden, J.P., Creedon, D.J., Heuckeroth, R.O., Keck, C.L., Zimonjic, D.B., Popescu, N.C., Johnson, E.M., Jr. and Milbrandt, J. 1997. TrnR2, a novel receptor that mediates neurturin and GDNF signaling through Ret. Neuron 18: 793-802.
- Naveilhan, P., Baudet, C., Mikaels, A., Shen, L., Westphal, H. and Ernfors, P. 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: GFRA1 (human) mapping to 10g25.3.

PRODUCT

GFR α -1 (h2): 293T Lysate represents a lysate of human GFR α -1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

GFR α -1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive GFR α -1 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com