

GDNF (S-12): sc-32551

BACKGROUND

Glial cell line-derived neurotrophic factor (GDNF) has been identified as a potent neurotrophic factor that enhances survival of midbrain dopaminergic neurons. GDNF is a glycosylated, disulfide-bonded homodimer and is a distantly related member of the TGF β superfamily of growth regulatory ligands. GDNF contains the seven conserved cysteine residues in the same relative spacing characteristic of all members of the TGF β superfamily. In embryonic midbrain cultures, GDNF promotes the survival and morphological differentiation of dopaminergic neurons and increases their high-affinity dopamine uptake. On the basis of these findings, it has been suggested that GDNF may have utility in the treatment of Parkinson's disease, which is marked by progressive degeneration of midbrain dopaminergic neurons.

REFERENCES

1. Schubert, D., et al. 1974. Clonal cell lines from the rat central nervous system. *Nature* 249: 224-227.
2. Derynck, R., et al. 1985. Human transforming growth factor β cDNA sequence and expression in tumor cell lines. *Nature* 316: 701-705.
3. ten Dijke, P., et al. 1988. Identification of a new member of the transforming growth factor type β gene family. *Proc. Natl. Acad. Sci. USA* 85: 4715-4719.

CHROMOSOMAL LOCATION

Genetic locus: GDNF (human) mapping to 5p13.2; Gdnf (mouse) mapping to 15 A1.

SOURCE

GDNF (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GDNF 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-32551 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GDNF (S-12) is recommended for detection of precursor and mature GDNF 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).

Suitable for use as control antibody for GDNF siRNA (h): sc-35462, GDNF siRNA (m): sc-35463, GDNF shRNA Plasmid (h): sc-35462-SH, GDNF shRNA Plasmid (m): sc-35463-SH, GDNF shRNA (h) Lentiviral Particles: sc-35462-V and GDNF shRNA (m) Lentiviral Particles: sc-35463-V.

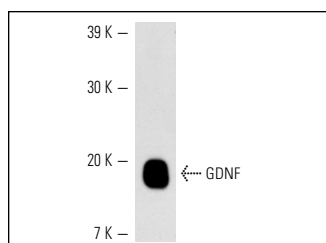
Molecular Weight of GDNF: 15 kDa.

Positive Controls: mouse brain extract: sc-2253.

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



GDNF (S-12): sc-32551. Western blot analysis of human recombinant GDNF.

SELECT PRODUCT CITATIONS

1. Ding, L.J., et al. 2011. FSH acts on the proliferation of type A spermatogonia via Nur77 that increases GDNF expression in the Sertoli cells. *FEBS Lett.* 585: 2437-2444.
2. Lacerda, C.M., et al. 2012. Local serotonin mediates cyclic strain-induced phenotype transformation, matrix degradation, and glycosaminoglycan synthesis in cultured sheep mitral valves. *Am. J. Physiol. Heart Circ. Physiol.* 302: H1983-H1990.

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.



Try **GDNF (B-8): sc-13147** or **GDNF (E-10): sc-398555**, our highly recommended monoclonal alternatives to GDNF (S-12). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **GDNF (B-8): sc-13147**.