SANTA CRUZ BIOTECHNOLOGY, INC.

GDNF (B-8): sc-13147

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 TGFβ superfamily of growth regulatory ligands. GDNF contains the seven conserved cysteine residues in the same relative spacing characteristic of all members of the TGFβ 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.

CHROMOSOMAL LOCATION

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

SOURCE

GDNF (B-8) is a mouse monoclonal antibody raised against amino acids 78-134 representing mature GDNF of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GDNF (B-8) is available conjugated to agarose (sc-13147 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13147 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13147 PE), fluorescein (sc-13147 FITC), Alexa Fluor® 488 (sc-13147 AF488), Alexa Fluor® 546 (sc-13147 AF546), Alexa Fluor® 594 (sc-13147 AF594) or Alexa Fluor® 647 (sc-13147 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13147 AF680) or Alexa Fluor® 790 (sc-13147 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GDNF (B-8) is recommended for detection of GDNF of mouse, rat and human origin by Western Blotting (starting dilution 1:500, dilution range 1:500-1:2,000), 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), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (r): sc-156116, GDNF shRNA Plasmid (h): sc-35462-SH, GDNF shRNA Plasmid (m): sc-35463-SH, GDNF shRNA Plasmid (r): sc-156116-SH, GDNF shRNA (h) Lentiviral Particles: sc-35462-V, GDNF shRNA (m) Lentiviral Particles: sc-35463-V and GDNF shRNA (r) Lentiviral Particles: sc-156116-V.

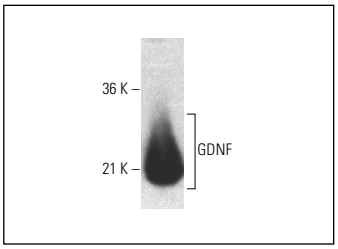
Molecular Weight of GDNF: 15 kDa.

Positive Controls: mouse brain extract: sc-2253.

STORAGE

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

DATA



GDNF (B-8): sc-13147. Western blot analysis of human recombinant GDNF.

SELECT PRODUCT CITATIONS

1. Wang, L.M., et al. 2004. Identification of the key amino acids of glial cell line-derived neurotrophic factor family receptor α-1 involved in its biological function. J. Biol. Chem. 279: 109-116.
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3. Sättler, M.B., et al. 2008. Strain-specific susceptibility for neurodegeneration in a rat model of autoimmune optic neuritis. J. Neuroimmunol. 193: 77-86.
4. Garbayo, E., et al. 2009. Effective GDNF brain delivery using microspheres—a promising strategy for Parkinson's disease. J. Control. Release 135: 119-126.
5. Henry, T.Q., et al. 2010. GDNF and MAPK-ERK pathway signaling is reduced during nephrogenesis following maternal under-nutrition. J. Dev. Orig. Health Dis. 1: 67-74.
6. Rodrigues, D.M., et al. 2011. Glial cell line-derived neurotrophic factor is a key neurotrophin in the postnatal enteric nervous system. Neurogastroenterol. Motil. 23: e44-e56.
7. Liu, W. and Rask-Andersen, H. 2014. Immunohistological analysis of neurturin and its receptors in human cochlea. Auris Nasus Larynx 41: 172-178.
8. Noori-Zadeh, A., et al. 2014. Non-viral human proGDNF gene delivery to rat bone marrow stromal cells under *ex vivo* conditions. J. Neurol. Sci. 339: 81-86.
9. Zhao, Y.F., et al. 2015. Multitarget intervention of Fasudil in the neuroprotection of dopaminergic neurons in MPTP-mouse model of Parkinson's disease. J. Neurol. Sci. 353: 28-37.

RESEARCH USE

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