

VGF (B-8): sc-365397

BACKGROUND

Nerve growth factor (NGF) is a peptide that plays a key role in the differentiation and survival of neurons in the peripheral nervous system (PNS) and the central nervous system (CNS). VGF is a peptide synthesized and secreted by neurons and is upregulated by NGF in the PC12 cell line. VGF is widely expressed in both the PNS and CNS, but is especially abundant in the adult hypothalamus. VGF plays an essential role in how the brain regulates energy expenditure and body weight. Its expression is rapidly induced by injury, the circadian clock, and neuronal activity.

CHROMOSOMAL LOCATION

Genetic locus: VGF (human) mapping to 7q22.1; Vgf (mouse) mapping to 5 G2.

SOURCE

VGF (B-8) is a mouse monoclonal antibody raised against amino acids 159-223 mapping within an internal region of VGF of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VGF (B-8) is available conjugated to agarose (sc-365397 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365397 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365397 PE), fluorescein (sc-365397 FITC), Alexa Fluor[®] 488 (sc-365397 AF488), Alexa Fluor[®] 546 (sc-365397 AF546), Alexa Fluor[®] 594 (sc-365397 AF594) or Alexa Fluor[®] 647 (sc-365397 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365397 AF680) or Alexa Fluor[®] 790 (sc-365397 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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

VGF (B-8) is recommended for detection of VGF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VGF siRNA (h): sc-42328, VGF siRNA (m): sc-42329, VGF shRNA Plasmid (h): sc-42328-SH, VGF shRNA Plasmid (m): sc-42329-SH, VGF shRNA (h) Lentiviral Particles: sc-42328-V and VGF shRNA (m) Lentiviral Particles: sc-42329-V.

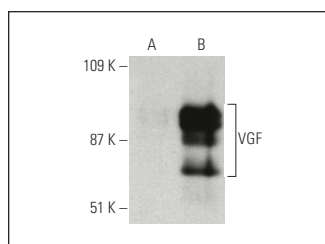
Molecular Weight of VGF: 90 kDa.

Positive Controls: PC-12 + NGF cell lysate: sc-3808 or PC-12 cell lysate: sc-2250.

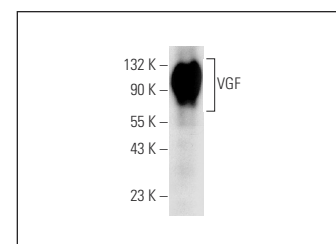
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



VGF (B-8) HRP: sc-365397 HRP. Direct western blot analysis of VGF expression in PC-12 (A) and NGF treated PC-12 (B) whole cell lysates.



VGF (B-8): sc-365397. Western blot analysis of VGF expression in NGF treated PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

- Sadahiro, M., et al. 2015. Role of VGF-derived carboxy-terminal peptides in energy balance and reproduction: analysis of "humanized" knockin mice expressing full-length or truncated VGF. *Endocrinology* 156: 1724-1738.
- Behnke, J., et al. 2017. Neuropeptide VGF promotes maturation of hippocampal dendrites that is reduced by single nucleotide polymorphisms. *Int. J. Mol. Sci.* 18: 612.
- Kim, J.Y., et al. 2020. SOX9 promotes stress-responsive transcription of VGF nerve growth factor inducible gene in renal tubular epithelial cells. *J. Biol. Chem.* 295: 16328-16341.
- Filippini, F., et al. 2023. Secretion of VGF relies on the interplay between LRRK2 and post-Golgi v-SNAREs. *Cell Rep.* 42: 112221.

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.