SANTA CRUZ BIOTECHNOLOGY, INC.

VGF (G-17): sc-10380

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 PC-12 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.

REFERENCES

1. Possenti, R., Eldridge, J.D., Paterson, B.M., Grasso, A. and Levi, A. 1989. A protein induced by NGF in PC12 cells is stored in secretory vesicles and released through the regulated pathway. EMBO J. 8: 2217-2223.
2. Salton, S.R., Fischberg, D.J. and Dong, K.W. 1991. Structure of the gene encoding VGF, a nervous system-specific mRNA that is rapidly and selectively induced by nerve growth factor in PC12 cells. Mol. Cell. Biol. 11: 2335-2349.
3. Mahata, M., Hortnagl, H., Mahata, S.K., Fischer-Colbrie, R. and Winkler, H. 1993. Messenger RNA levels of chromogranin B, secretogranin II, and VGF in rat brain after AF64A-induced septohippocampal cholinergic lesions. J. Neurochem. 61: 1648-1656.
4. van den Pol, A.N., Bina, K., Decavel, C. and Ghosh, P. 1994. VGF expression in the brain. J. Comp. Neurol. 347: 455-469.
5. Lombardo, A., Rabacchi, S.A., Cremisi, F., Pizzorusso, T., Cenni, M.C., Possenti, R., Barsacchi, G. and Maffei, L. 1995. A developmentally regulated nerve growth factor-induced gene, VGF, is expressed in geniculocortical afferents during synaptogenesis. Neuroscience 65: 997-1008.
6. Wisor, J.P. and Takahashi, J.S. 1997. Regulation of the vgf gene in the golden hamster suprachiasmatic nucleus by light and by the circadian clock. J. Comp. Neurol. 378: 229-238.
7. Snyder, S.E. and Salton, S.R. 1998. Expression of VGF mRNA in the adult rat central nervous system. J. Comp. Neurol. 394: 91-105.

CHROMOSOMAL LOCATION

Genetic locus: Vgf (mouse) mapping to 5 G2.

SOURCE

VGF (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of VGF of rat origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10380 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

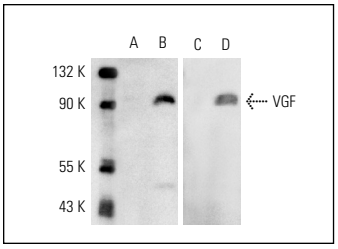
VGF (G-17) is recommended for detection of VGF of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VGF siRNA (m): sc-42329, VGF siRNA (r): sc-72031, VGF shRNA Plasmid (m): sc-42329-SH, VGF shRNA Plasmid (r): sc-72031-SH, VGF shRNA (m) Lentiviral Particles: sc-42329-V and VGF shRNA (r) Lentiviral Particles: sc-72031-V.

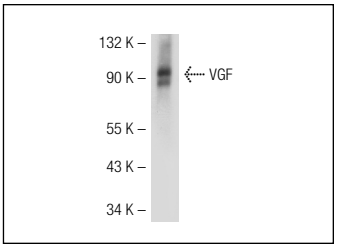
Molecular Weight of VGF: 90 kDa.

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

DATA



Western blot analysis of VGF expression in whole cell lysates prepared from untreated (**A**,**C**) and NGF-treated (**B**,**D**) PC-12 cells. Antibodies tested include VGF (D-20): sc-10381 (**A**,**B**) and VGF (G-17): sc-10380 (**C**,**D**).



VGF (G-17): sc-10380. Western blot analysis of VGF expression in NGF-treated PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Moss, A., Ingram, R., Koch, S., Theodorou, A., Low, L., Baccei, M., Hathway, G.J., Costigan, M., Salton, S.R. and Fitzgerald, M. 2008. Origins, actions and dynamic expression patterns of the neuropeptide VGF in rat peripheral and central sensory neurones following peripheral nerve injury. Mol. Pain 4: 62.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **VGF (B-8): sc-365397** or **VGF (B-6): sc-515482**, our highly recommended monoclonal alternatives to VGF (G-17).