

BDNF (P-14): sc-33905

BACKGROUND

Neurotrophins function to regulate naturally occurring cell death of neurons during development. The prototype neurotrophin is nerve growth factor (NGF), originally discovered in the 1950s as a soluble peptide promoting the survival of, and neurite outgrowth from, sympathetic ganglia. Three additional structurally homologous neurotrophic factors have been identified. These include brain-derived neurotrophic factor (BDNF), neurotrophin-3 (NT-3) and neurotrophin-4 (NT-4) (also designated NT-5). These various neurotrophins stimulate the *in vitro* survival of distinct, but partially overlapping, populations of neurons. The cell surface receptors through which neurotrophins mediate their activity have been identified. For instance, the Trk A receptor is the preferential receptor for NGF, but also binds NT-3 and NT-4. The Trk B receptor binds both BDNF and NT-4 equally well, and binds NT-3 to a lesser extent, while the Trk C receptor only binds NT-3.

CHROMOSOMAL LOCATION

Genetic locus: BDNF (human) mapping to 11p14.1; Bdnf (mouse) mapping to 2 E3.

SOURCE

BDNF (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BDNF of human origin.

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-33905 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

BDNF (P-14) is recommended for detection of BDNF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

BDNF (P-14) is also recommended for detection of BDNF in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for BDNF siRNA (h): sc-42121, BDNF siRNA (m): sc-42122, BDNF shRNA Plasmid (h): sc-42121-SH, BDNF shRNA Plasmid (m): sc-42122-SH, BDNF shRNA (h) Lentiviral Particles: sc-42121-V and BDNF shRNA (m) Lentiviral Particles: sc-42122-V.

Molecular Weight of BDNF precursor: 32 kDa.

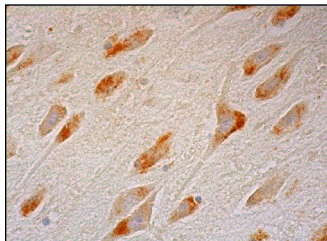
Molecular Weight of mature BDNF: 14 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, U-87 MG cell lysate: sc-2411 or human platelet extract : sc-363773.

STORAGE

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

DATA



BDNF (P-14): sc-33905. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells and glial cells.

SELECT PRODUCT CITATIONS

1. Lin, H., et al. 2012. Molecular mechanisms associated with the antidepressant effects of the class I histone deacetylase inhibitor MS-275 in the rat ventrolateral orbital cortex. *Brain Res.* 1447: 119-125.
2. Gulino, R. and Gulisano, M. 2012. Involvement of brain-derived neurotrophic factor and sonic hedgehog in the spinal cord plasticity after neurotoxic partial removal of lumbar motoneurons. *Neurosci. Res.* 73: 238-247.

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.



Try **pro BDNF (5H8): sc-65514** or **pro BDNF (9C1): sc-65513**, our highly recommended monoclonal alternatives to BDNF (P-14). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **pro BDNF (5H8): sc-65514**.