

NF-H (H-100): sc-20112

BACKGROUND

Neurofilament-H (NF-H), for neurofilament heavy polypeptide, a member of the intermediate filament family, is a major component of neuronal cytoskeletons. Neurofilaments are dynamic structures; they contain phosphorylation sites for a large number of protein kinases, including protein kinase A, protein kinase C, cyclin-dependent kinase 5, extracellular signal regulated kinase, glycogen synthase kinase-3, and stress-activated protein kinase γ . In addition to their role in the control of axon caliber, neurofilaments may affect other cytoskeletal elements, such as microtubules and Actin filaments. Changes in neurofilament phosphorylation or metabolism are frequently observed in neurodegenerative diseases, including amyotrophic lateral sclerosis (ALS), Parkinson's disease, and Alzheimer's disease.

REFERENCES

- Mattei, M.G., et al. 1988. The gene encoding the large human neurofilament subunit (NF-H) maps to the q121-q131 region on human chromosome 22. *Hum. Genet.* 80: 293-295.
- Angelides, K.J., et al. 1989. Assembly and exchange of intermediate filament proteins of neurons: neurofilaments are dynamic structures. *J. Cell Biol.* 108: 1495-1506.
- Sihag, R.K., et al. 1989. *In vivo* phosphorylation of distinct domains of the 70 kilodalton neurofilament subunit involves different protein kinases. *J. Biol. Chem.* 264: 457-464.
- Hisanaga, S., et al. 1990. Effects of phosphorylation of the neurofilament L protein on filamentous structures. *Cell Regul.* 1: 237-248.
- Gonda, Y., et al. 1990. Involvement of protein kinase C in the regulation of assembly-disassembly of neurofilaments *in vitro*. *Biochem. Biophys. Res. Commun.* 167: 1316-1325.
- Nakamura, Y., et al. 1997. Abnormal distribution of neurofilament L in neurons with Alzheimer's disease. *Neurosci. Lett.* 225: 201-204.

CHROMOSOMAL LOCATION

Genetic locus: NEFH (human) mapping to 22q12.2; Nefh (mouse) mapping to 11 A1.

SOURCE

NF-H (H-100) is a rabbit polyclonal antibody raised against amino acids 1-100 mapping at the N-terminus of NF-H 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.

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.

APPLICATIONS

NF-H (H-100) is recommended for detection of NF-H 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).

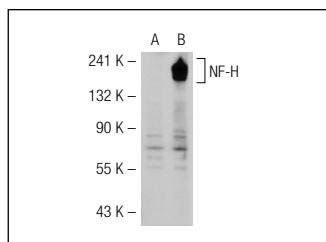
NF-H (H-100) is also recommended for detection of NF-H in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for NF-H siRNA (h): sc-42068, NF-H siRNA (m): sc-42069, NF-H shRNA Plasmid (h): sc-42068-SH, NF-H shRNA Plasmid (m): sc-42069-SH, NF-H shRNA (h) Lentiviral Particles: sc-42068-V and NF-H shRNA (m) Lentiviral Particles: sc-42069-V.

Molecular Weight of NF-H: 200 kDa.

Positive Controls: NF-H (h): 293T Lysate: sc-111457, SH-SY5Y cell lysate: sc-3812 or H4 cell lysate: sc-2408.

DATA



NF-H (H-100): sc-20112. Western blot analysis of NF-H expression in non-transfected: sc-117752 (A) and human NF-H transfected: sc-111457 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Lin, H., et al. 2004. 3' untranslated region in a light neurofilament (NF-L) mRNA triggers aggregation of NF-L and mutant superoxide dismutase 1 proteins in neuronal cells. *J. Neurosci.* 24: 2716-2726.
- Thi, M.M., et al. 2008. Aquaporin-4 water channels in enteric neurons. *J. Neurosci. Res.* 86: 448-456.
- García-Ayuso, D., et al. 2010. Retinal ganglion cell numbers and delayed retinal ganglion cell death in the P23H rat retina. *Exp. Eye Res.* 91: 800-810.
- Zhu, Z.A., et al. 2012. Reversion of multidrug resistance by SKI-II in SGC7901/DDP cells and exploration of underlying mechanisms. *Asian Pac. J. Cancer Prev.* 13: 625-631.

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Try **NF-H (RNF402): sc-32729** or **NF-H (A-12): sc-133165**, our highly recommended monoclonal alternatives to NF-H (H-100).