

# NF-H/L (2F11): sc-52350

## BACKGROUND

Neurofilament-L (NF-L), for neurofilament light 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  $\gamma$ . 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

1. Kluck, P., et al. 1984. Hirschsprung's disease studied with monoclonal antineurofilament antibodies on tissue sections. *Lancet* 1: 652-654.
2. 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.
3. 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.
4. Sihag, R.K., et al. 1989. *In vivo* phosphorylation of distinct domains of the 70 kDa Neurofilament subunit involves different protein kinases. *J. Biol. Chem.* 264: 457-464.
5. Hisanaga, S., et al. 1990. Effects of phosphorylation of the Neurofilament-L protein on filamentous structures. *Cell Regul.* 1: 237-248.
6. 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.

## CHROMOSOMAL LOCATION

Genetic locus: NEFH (human) mapping to 22q12.2, NEFL (human) mapping to 8p21.2; Nefh (mouse) mapping to 11 A1, Nefl (mouse) mapping to 14 D1.

## SOURCE

NF-H/L (2F11) is a mouse monoclonal antibody raised against NF-H from isolated brain cells of human origin.

## PRODUCT

Each vial contains 500  $\mu$ l culture supernatant containing IgG<sub>1</sub> with < 0.1% sodium azide.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## APPLICATIONS

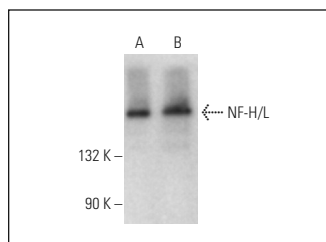
NF-H/L (2F11) is recommended for detection of NF-H and NF-L of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20  $\mu$ l per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

NF-H/L (2F11) is also recommended for detection of NF-H and NF-L in additional species, including feline.

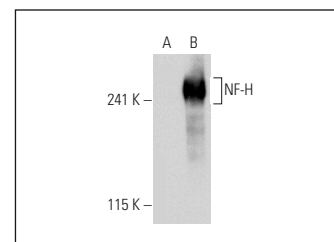
Molecular Weight of NF-L/H: 68/200 kDa.

Positive Controls: NF-H (h): 293T Lysate: sc-111457, BE (2)-M17 whole cell lysate: sc-364358 or IMR-32 cell lysate: sc-2409.

## DATA



NF-H/L (2F11): sc-52350. Western blot analysis of NF-H/L expression in IMR-32 (A) and BE (2)-M17 (B) whole cell lysates.



NF-H/L (2F11): sc-52350. 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.