

NF-M (m): 293 Lysate: sc-179000

BACKGROUND

Neurofilament-M (NF-M), for neurofilament medium 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

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2. 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.
3. 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.
4. Hisanaga, S., et al. 1990. Effects of phosphorylation of the neurofilament L protein on filamentous structures. *Cell Regul.* 1: 237-248.
5. 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.
6. Nakamura, Y., et al. 1997. Abnormal distribution of neurofilament L in neurons with Alzheimer's disease. *Neurosci. Lett.* 225: 201-204.
7. Nakamura, Y., et al. 1999. Casein kinase II is responsible for phosphorylation of NF-L at Ser 473. *FEBS Lett.* 455: 83-86.
8. Strong, M.J. 1999. Neurofilament metabolism in sporadic amyotrophic lateral sclerosis. *J. Neurol. Sci.* 169: 170-177.

CHROMOSOMAL LOCATION

Genetic locus: Nefm (mouse) mapping to 14 D1.

PRODUCT

NF-M (m): 293 Lysate represents a lysate of mouse NF-M transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

NF-M (m): 293 Lysate is suitable as a Western Blotting positive control for mouse reactive NF-M antibodies. Recommended use: 10-20 μ l per lane.

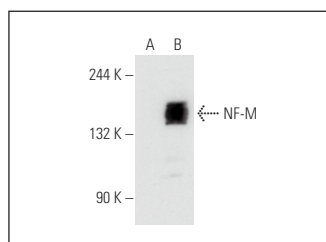
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

NF-M (2Q168): sc-71688 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse NF-M expression in NF-M transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

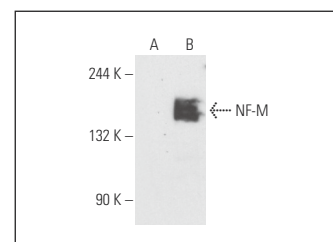
RECOMMENDED SUPPORT REAGENTS

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

DATA



NF-M (2Q168): sc-71688. Western blot analysis of NF-M expression in non-transfected: sc-110760 (A) and mouse NF-M transfected: sc-179000 (B) 293 whole cell lysates.



NF-M (NF-09): sc-51683. Western blot analysis of NF-M expression in non-transfected: sc-110760 (A) and mouse NF-M transfected: sc-179000 (B) 293 whole cell lysates.

PROTOCOLS

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