

Anti-Neurofilament H (NF-H) Antibody (Previously Covance catalog# SMI-37R)

Catalog# / Size	835801 / 100 µL
Clone	SMI 37
Regulatory Status	RUO
Other Names	Neurofilament heavy polypeptide, NF-H, 200 kD neurofilament protein, neurofilament triplet H protein
Previously	Covance Catalog# SMI-37R
Isotype	Mouse IgM, κ
Description	Neurofilaments (NFs) are ~10 nanometer, type IV intermediate filaments expressed in neurons. NFs are the major components of the neuronal cytoskeleton, and primarily function to provide structural support for axons and regulate axonal diameter. There are three major mammalian neurofilament subunits which are named based on their apparent molecular weight: 1) neurofilament light (NF-L, ~70 kD), 2) neurofilament medium (NF-M, ~145-160 kD), and 3) neurofilament heavy (NF-H, ~200-220 kD). Neurofilaments are extensively phosphorylated, and their phosphorylation status plays an important role in modulation of their function. Abnormal NF modifications, mutations, and accumulation have been associated with neurodegenerative diseases. NF immunostaining is commonly used as a diagnostic marker for neuropathology detection. NFs are also useful for differentiating neurons (positive for NF) from glia (negative for NF).

Product Details

Verified Reactivity	Human, Mouse, Rat
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Ascites Fluid (contains 0.01M sodium azide).
Preparation	Ascites
Concentration	The concentration is not quantified as this product is sold as undiluted crude mouse ascites fluid. The concentration might vary from lot-to-lot and an estimated concentration would be 1-3 mg/ml.
Storage & Handling	Store at -20°C. Upon initial thawing, apportion into working aliquots and store at -20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody. For long-term storage, keep the antibody at -80°C.
Application	IHC-P - Quality tested WB - Verified
Recommended Usage	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a dilution range of 1/1000 - 1/2000 is suggested. For Western blotting, the suggested use of this reagent is 1/1000 - 1/2000. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	SMI 37 reacts with a nonphosphorylated epitope in neurofilament H of most mammalian species. Immunocytochemically, SMI 37 visualizes some neuronal cell bodies, dendrites and thick axons in the central and peripheral nervous systems. SMI 37 staining is more restricted than that seen with SMI 32 or SMI 38 and Neuronal cell bodies are intensely stained while neuronal processes staining is less prominent.
Application References	1. Petzold A, <i>et al.</i> 2011. <i>Brain</i> 134:464. (WB) PubMed
(PubMed link indicates BioLegend citation)	
Product Citations	1. Petzold A, <i>et al.</i> 2011. <i>Brain</i> . 134:464-483. PubMed

Antigen Details

Cell Type	Mature Neurons
Biology Area	Cell Biology, Neuroscience, Neuroscience Cell Markers
Molecular Family	Intermediate Filaments
Gene ID	4744

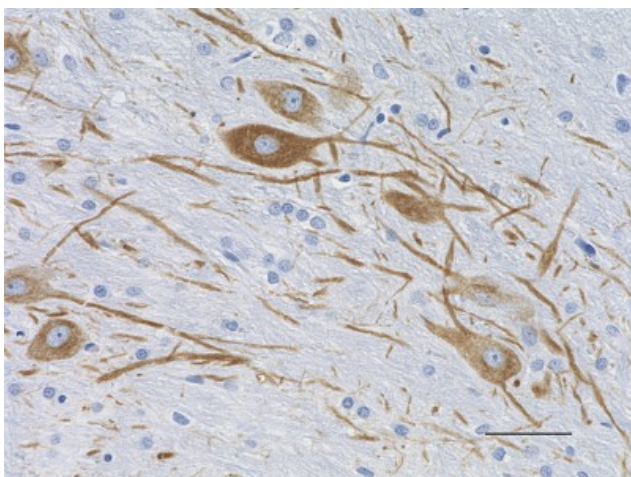
Related Protocols

[Immunohistochemistry Protocol for Sternberger Monoclonal Antibodies](#)

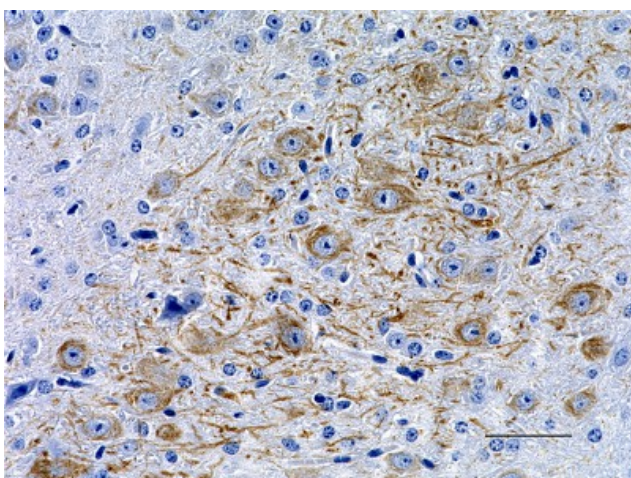
Other Formats

Anti-Neurofilament H (NF-H), Purified anti-Neurofilament H (NF-H)

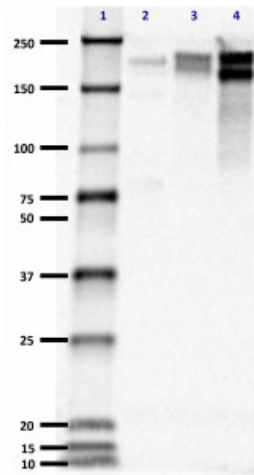
Product Data



IHC staining of anti-Neurofilament H (NF-H) antibody (clone SMI 37) on formalin-fixed paraffin-embedded rat brain tissue. Following antigen retrieval using Retrieve-All Antigen Unmasking System 3: Acidic, 100X (Cat. No. 927601), the tissue was incubated with a 1:2000 dilution of the primary antibody for 60 minutes at room temperature. BioLegend's Ultra-Streptavidin (USA) HRP kit (Multi-Species, DAB, Cat. No. 929901) was used for detection followed by hematoxylin counterstaining, according to the protocol provided. The image was captured with a 40X objective. Scale bar: 50 μ m



IHC staining of anti-Neurofilament H (NF-H) antibody (clone SMI 37) on formalin-fixed paraffin-embedded mouse brain tissue. Following antigen retrieval using Retrieve-All Antigen Unmasking System 3: Acidic, 100X (Cat. No. 927601), the tissue was incubated with a 1:2000 dilution of the primary antibody for 60 minutes at room temperature. BioLegend's Ultra-Streptavidin (USA) HRP kit (Multi-Species, DAB, Cat. No. 929901) was used for detection followed by hematoxylin counterstaining, according to the protocol provided. The image was captured with a 40X objective. Scale bar: 50 μ m



Western blot of anti-Neurofilament H (NF-H) antibody (clone SMI 37). Lane 1: Molecular weight marker; Lane 2: 20 μ g of human brain lysate; Lane 3: 20 μ g of mouse brain lysate; Lane 4: 20 μ g of rat brain lysate. The blot was incubated with a 1:2000 dilution of the primary antibody overnight at 4°C, followed by incubation with HRP labeled goat anti-mouse IgM. Enhanced chemiluminescence was used as the detection system.

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587