

Rabbit Anti-NF-L antibody

SL0707R

Product Name NF-L

Chinese Name 低分子量神经丝蛋白抗体

Alias

Neurofilament L; Neurofilament 68; Neurofilament triplet L; 70 kD Neurofilament Light; 68kDa neurofilament protein; CMT 1F; CMT 2E; CMT1F; CMT2E; FLJ53642; Light molecular weight neurofilament protein; NEFL; Neurofilament light; Neurofilament light polypeptide 68kDa; Neurofilament light polypeptide; Neurofilament protein, light chain; Neurofilament subunit NF L; Neurofilament triplet L protein; NF 68; NF L; NF68; NFL; NFL_HUMAN.

Research Area

Cell biology Neurobiology Signal transduction

Immunogen Species

Rabbit

Clonality

Polyclonal

React Species

Human, Mouse, Rat,

Applications

WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug/Test
(Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight

68kDa

Cellular localization

cytoplasmic

Form

Liquid

Concentration 1mg/ml

immunogen

KLH conjugated synthetic peptide derived from human NH-L intermedial: 301-400/543

Lsotype

IgG

Purification

affinity purified by Protein A

Buffer Solution

1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage

Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

[PubMed](#)

Neurofilament light polypeptide also called NF-L; Neurofilament triplet L protein; 68 kDa neurofilament protein. Neurofilaments usually contain three intermediate filament proteins: L, M, and H which are involved in the maintenance of neuronal caliber. The extra mass and high charge density that distinguish the neurofilament proteins from all other intermediate filament proteins are due to the tailpiece extensions. This region may form a charged scaffolding structure suitable for interaction with other neuronal components or ions. NF-L is the most abundant of the three neurofilament proteins and, as the other nonepithelial intermediate filament proteins, it can form homopolymeric 10-nm filaments. Belongs to the intermediate filament family.

Function:

Neurofilaments usually contain three intermediate filament proteins: L, M, and H which are involved in the maintenance of neuronal caliber.

Subunit:

Interacts with ARHGEF28. Interacts with TRIM2.

Post-translational modifications:

O-glycosylated.

**Product
Detail**

Phosphorylated in the head and rod regions by the PKC kinase PKN1, leading to the inhibition of polymerization.

Ubiquitinated in the presence of TRIM2 and UBE2D1.

DISEASE:

Defects in NEFL are the cause of Charcot-Marie-Tooth disease type 1F (CMT1F) [MIM:607734]. CMT1F is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathy or CMT1, and primary peripheral axonal neuropathy or CMT2. Neuropathies of the CMT1 group are characterized by severely reduced nerve conduction velocities (less than 38 m/sec), segmental demyelination and remyelination with onion bulb formations on nerve biopsy, slowly progressive distal muscle atrophy and weakness, absent deep tendon reflexes, and hollow feet. CMT1F is characterized by onset in infancy or childhood (range 1 to 13 years).

Defects in NEFL are the cause of Charcot-Marie-Tooth disease type 2E (CMT2E) [MIM:607684]. CMT2E is an autosomal dominant form of Charcot-Marie-Tooth disease type 2. Neuropathies of the CMT2 group are characterized by signs of axonal regeneration in the absence of obvious myelin alterations, normal or slightly reduced nerve conduction velocities, and progressive distal muscle weakness and atrophy.

Similarity:

Belongs to the intermediate filament family.

SWISS:

P07196

Gene ID:

4747

Database links:

[Entrez Gene: 4747](#) Human

[Entrez Gene: 18039](#) Mouse

[Entrez Gene: 83613](#) Rat

[Omim: 162280](#) Human

[SwissProt: P07196](#) Human

[SwissProt: P08551](#) Mouse

[SwissProt: P19527](#) Rat

[Unigene: 521461](#) Human

[Unigene: 1956](#) Mouse

[Unigene: 18568](#) Rat

Neurobiology 相关蛋白 (Neurobiology)

低分子量神经丝蛋白,简称 NF-L,分子量为 68kDa, NF-L 的聚集与神经退行性疾病的发病机理相关,如运动神经元的降解等。

神经纤丝蛋白的功能是提供弹性使神经纤维易于伸展和防止断裂。

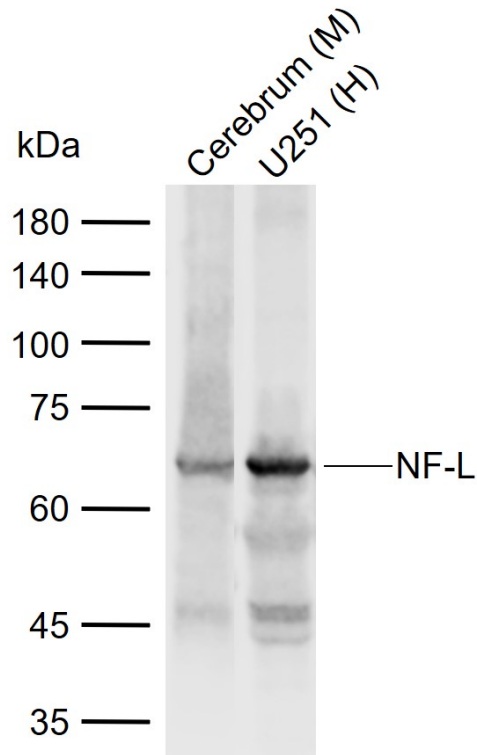
神经丝是中间纤维的一种重要类型又称神经微丝蛋白,特异地在神经细胞内表达,并在轴突内相互平行排列成束。哺乳动物的神经丝由 3 种蛋白组成:

低分子量神经丝蛋白,简称 NF-L; 分子量为 68kDa;

中分子量神经丝蛋白,简称 NF-M; 分子量为 160kDa;

高分子量神经丝蛋白,简称 NF-H, 分子量为 200 kDa。

**Product
Picture**



Sample:

Lane 1: Mouse Cerebrum tissue lysates

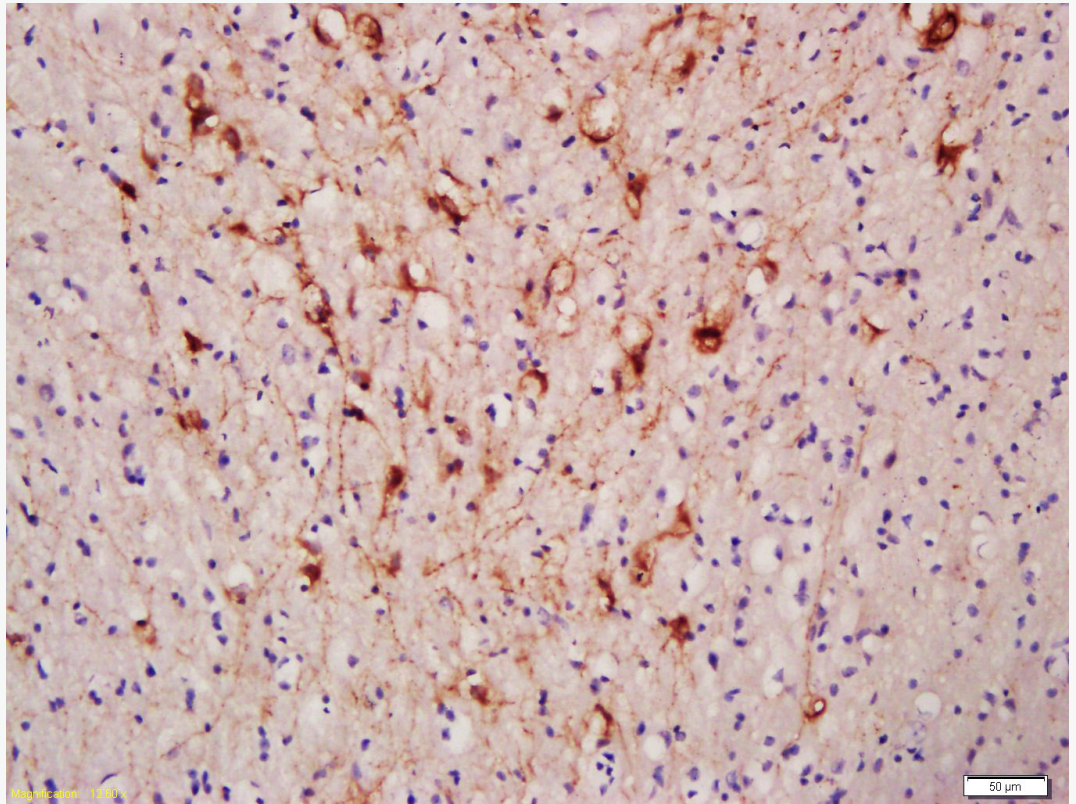
Lane 2: Human U251 cell lysates

Primary: Anti-NF-L (SL0707R) at 1/1000 dilution

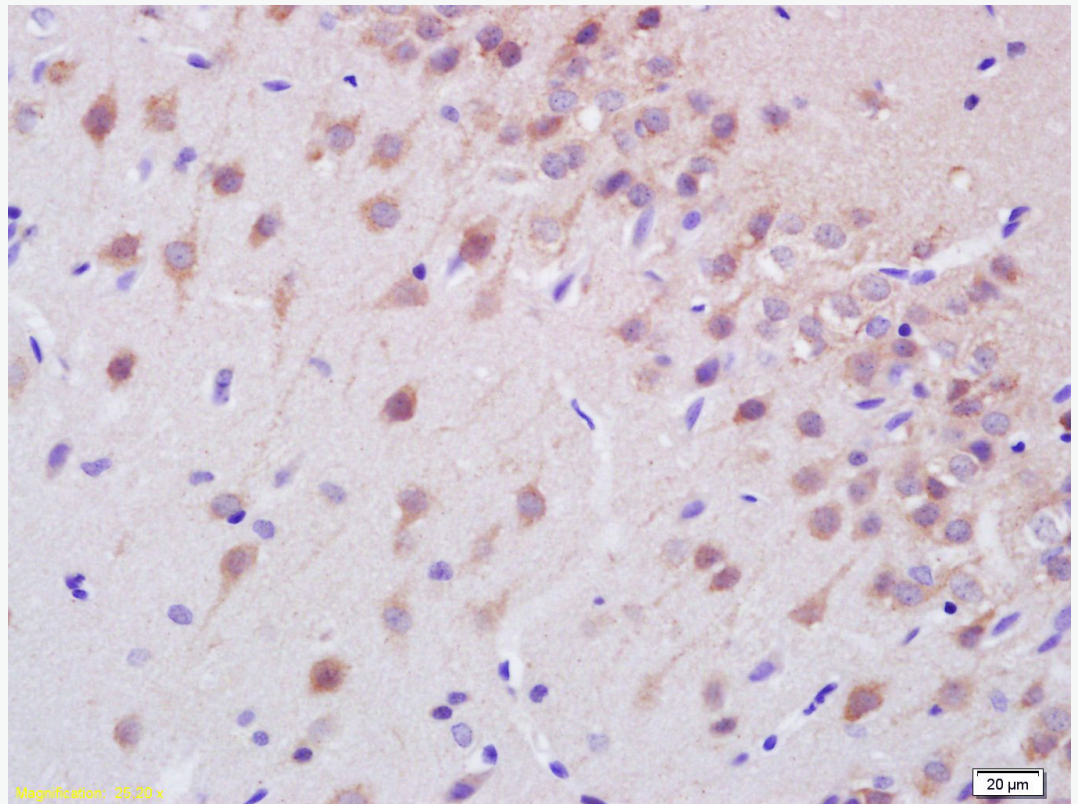
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 68 kDa

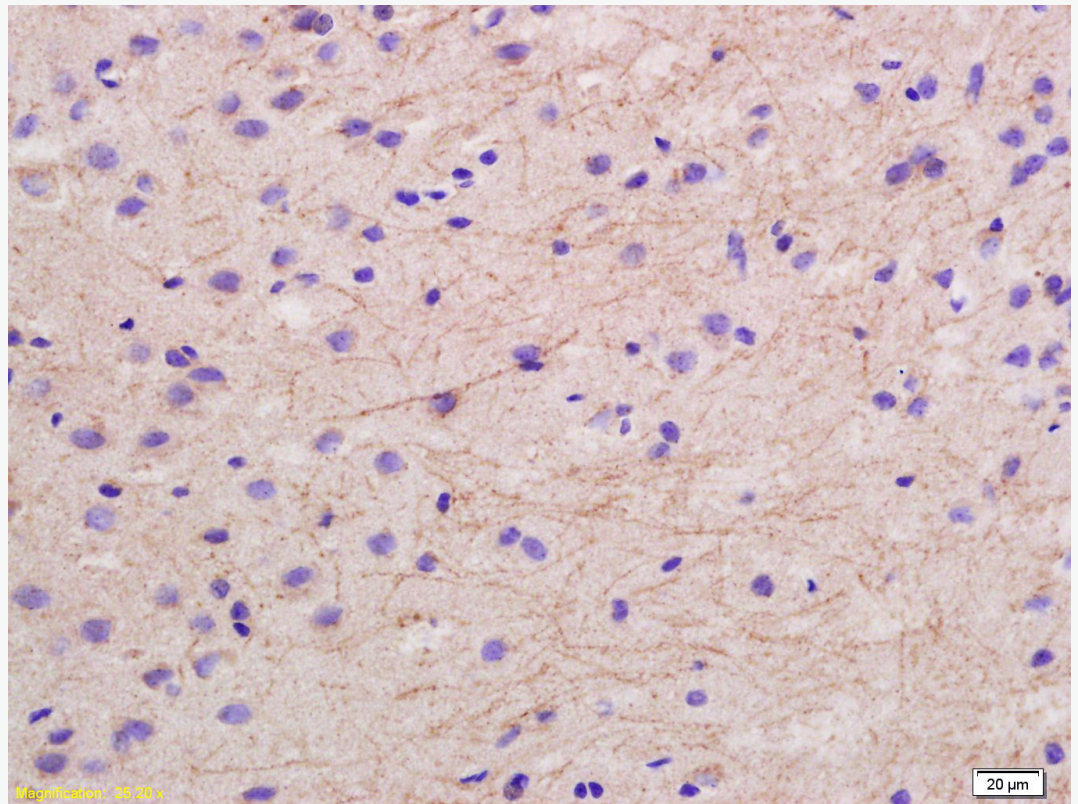
Observed band size: 68 kDa



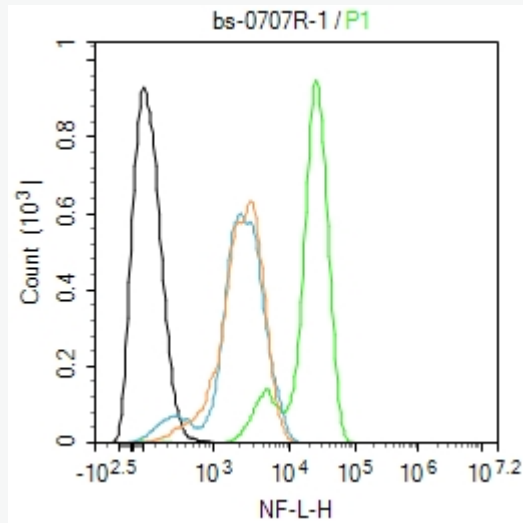
Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: 0.4% Pepsin, 37°C, 30min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-NF-L/Neurofilament L/Neurofilament 68 Polyclonal Antibody, Unconjugated (SL0707R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-NF-L/Neurofilament L/Neurofilament 68 Polyclonal Antibody, Unconjugated (SL0707R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



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Blank control: SHSY5Y.

Primary Antibody (green line): Rabbit Anti-NF-L antibody (SL0707R)

Dilution: 1ug/Test;

Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 0.5ug/Test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20°C.The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.