NF-M Recombinant Antibody [JM11-20] - Rat IgG1 (Chimeric)

HA601408

Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey
Applications:	IHC-Fr, IHC-P, WB
Molecular Wt:	Predicted band size: 102 kDa
Clone number:	JM11-20

Description: 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 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.

Immunogen: Synthetic peptide within Human NEFM aa 651-692 / 916.

Positive control: Human cerebellum tissue, mouse cerebellum tissue, rat cerebellum tissue, Mouse brain tissue lysate, Rat brain tissue lysate.

Subcellular location: Cell projection, Cytoplasm, Cytoskeleton, Intermediate filament.

Database links: SwissProt: P07197 Human | P08553 Mouse | P12839 Rat

Recommended Dilutions:

IHC-Fr	1:500
IHC-P	1:500
WB	1:5,000-1:10,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

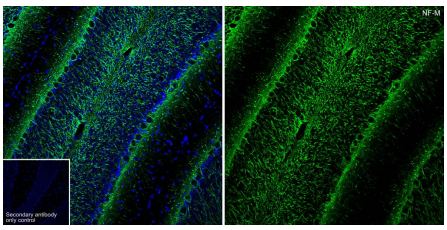

Fig1: Application: IHC-Fr

Species: Mouse

Site: Cerebellum

Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

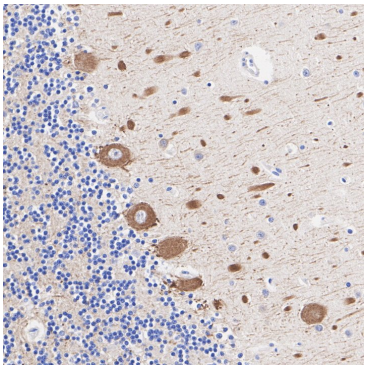

Fig2: Immunohistochemical analysis of paraffin-embedded human cerebellum tissue with Rat anti-NF-M antibody (HA601408) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601408) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

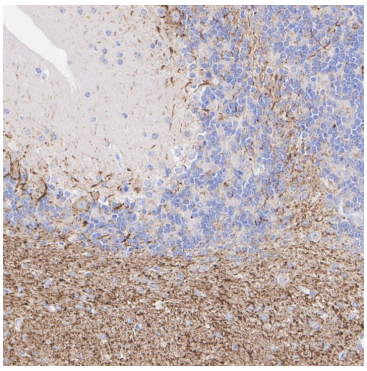

Fig3: Immunohistochemical analysis of paraffin-embedded mouse cerebellum tissue with Rat anti-NF-M antibody (HA601408) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601408) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

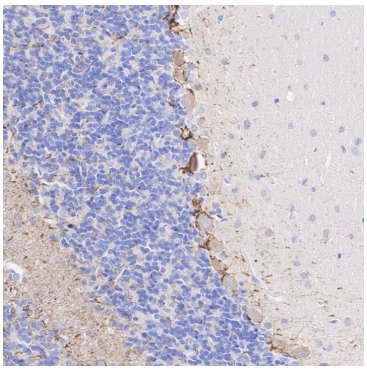

Fig4: Immunohistochemical analysis of paraffin-embedded rat cerebellum tissue with Rat anti-NF-M antibody (HA601408) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601408) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

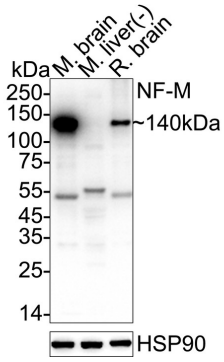

Fig5: Western blot analysis of NF-M on different lysates with Rat anti-NF-M antibody (HA601408) at 1/5,000 dilution.

Lane 1: Mouse brain tissue lysate
Lane 2: Mouse liver tissue lysate (negative)
Lane 3: Rat brain tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 102 kDa
Observed band size: 140 kDa

Exposure time: 23 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601408) at 1/2,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/5,000 dilution was used for 1 hour at room temperature.

Background References

1. Li D et al. NEFM DNA methylation correlates with immune infiltration and survival in breast cancer. Clin Epigenetics. 2021 May
2. Sohrabi N et al. Regulatory Role of Insulin on Endogenous L1 ORF1 and NEFM Gene Expression through PI3K Signaling Pathway Specifically in Neuroblastoma Cell Line. Iran J Public Health. 2023 Mar