Hello Bio, Inc. 304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500 F. 609-228-4994

customercare-usa@hellobio.com



DATASHEET

Anti-Neurofilament M (NF-M) antibody ValidAbTM

Product overview

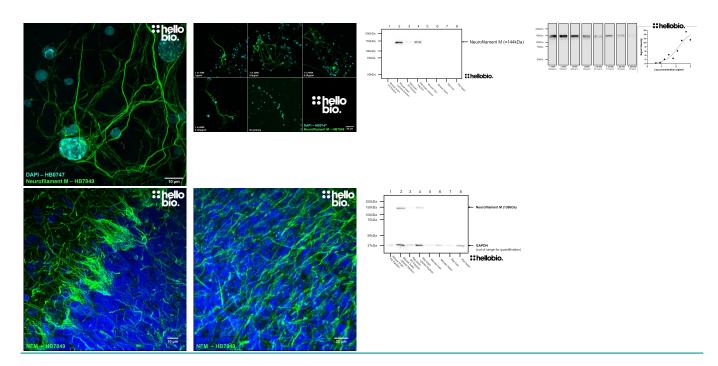
Name Anti-Neurofilament M (NF-M) antibody ValidAbTM

Cat No HB7849
Host Mouse
Clonality Monoclonal
Target Neurofilament M

Description Antibody to Neurofilament M - neurofilament component expressed in neurones. Part of the ValidAb™

range of highly validated, data-rich antibodies.

Validation data



Product information

Immunogen Amino acids 677 - 845 of rat neurofilament M expressed in a fusion protein in E.coli

Clone number 3H11 Isotype IgG1

Purification Protein G affinity chromatography

Concentration 1mg/ml

Formulation 50% PBS, 50% glycerol + 5mM sodium azide **Predicted species reactivity** Chicken, Cow, Human, Mouse, Pig, Rat

Tested species reactivity Mouse, Rat

Tested applications

Applications ICC, WB, IHC(IF)

Western blot optimal 125ng/ml (1:8000) as assessed in rat brain cytosol preparation

concentration

IHC(IF) optimal concentration 1μg/ml (1:1000 dilution) as assessed in 4% PFA fixed rat brain sections

ICC optimal concentration

500ng/ml (1:2000) as assessed in cultured rat neurones

Positive control

Neurofilament M is highly expressed in neural tissue and also found in HEK293 cells.

Negative controlAny tissue not of neural origin and nearly all cell lines.

Open data link Please follow this link to OSF

Target information

Other names NF-M, NFM, NEFM, 160 kDa neurofilament protein, Neurofilament 3, Neurofilament triplet M protein

UniProt ID P07197 Gene name NEFM

NCBI full gene name neurofilament medium chain

Entrez gene ID 4741

Amino acids 916 (102.4kDa)

Isoforms Neurofilament M has two isoforms: Isoform 1 (canonical): 916 amino acids, 102.4kDa; Isoform 2

(missing residues 1-376): 540aa, 59.5kDa.

Expression Expressed within neurones only throughout the body **Subcellular expression** Expressed within the cytoskeleton and axons only.

Target function Neurofilament M (NFM) is a key component, along with Neurofilaments L and H, internexin and

peripherin of neurofilaments. NFM forms heterodimers with the other neurofilament components to

make up the neurofilaments that stabilise and maintain axonal diameter. The leading methionine is removed to leave the mature polypeptide chain.

Post translational Phosphorylated on numerous residues leading to the large discrepancy between predicted molecular

modifications weight and the apparent weight in SDS-PAGE experiments.

Homology (compared to Mice and rat neurofilament M show 89.2% and 89.1% identity to the human protein respectively.

human)

Processing

Similar proteins Similar proteins to neurofilament M include: Alpha internexin (47.7% identity), Neurofilament H (43.6%

identity), Neurofilament L (53.0% identity) Vimentin (45.7% identity), GFAP (46.7% identity) and

Peripherin (45.2% identity)

Storage & Handling

Storage instructions -20°C Shipping Conditions On ice

Important This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

for human or veterinary use

References

Neurofilaments and Neurofilament Proteins in Health and Disease

Yuan A et al (2017) Cold Spring Harbor Perspectives in Biology 9(4)

PubMedID 28373358

Neurofilaments at a glance

Yuan A et al (2012) Journal of Cell Science 125(14) **PubMedID**22956720

Neurofilament subunits are integral components of synapses and modulate neurotransmission and behavior in vivo

Yuan A et al (2015) Molecular Psychiatry 20(8) **PubMedID**25869803

Neurofilament-M interacts with the D1 dopamine receptor to regulate cell surface expression and desensitization

Kim O et al (2002) Journal of Neuroscience 22(14) **PubMedID** 12122054