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DATASHEET

Anti-Neurofilament L (NF-L) antibody ValidAb™

Product overview

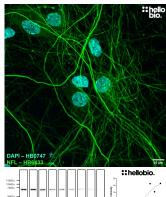
Name Anti-Neurofilament L (NF-L) antibody ValidAb™

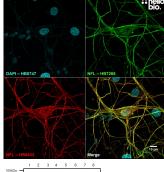
Cat No HB6433 Host Mouse Clonality Monoclonal **Target** Neurofilament L

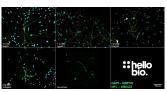
Description Antibody to Neurofilament L - neurofilament component expressed in neurones. Part of the ValidAb

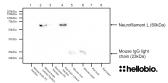
TM range of highly validated, data-rich antibodies.

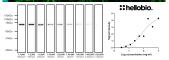
Validation data

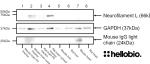


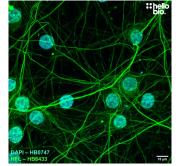


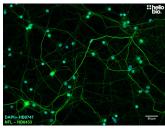


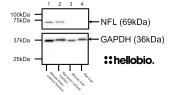












Product information

Full length dephosphorylated neurofilament L protein of porcine origin Immunogen

Epitope Amino acids 446 - 456 (HVQEEQIEVE)

Clone number DA2 Isotype lgG1

Purification Protein G affinity chromatography

Concentration 1mg/ml

Formulation 50% PBS, 50% glycerol + 5mM sodium azide

Predicted species reactivity **Tested species reactivity**

Mouse, Rat, Human, Pig, Cow, Horse

Mouse, Rat

Tested applications

Applications

ICC, WB

Western blot optimal

50ng/ml (1:20,000 dilution) as tested in rat brain cytosol fraction

concentration

ICC optimal concentration

Positive control

Negative control Open data link

1µg/ml (1:1000) as measured in cultured rat neurones

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

Any tissue not of neural origin and nearly all cell lines.

Please follow this link to OSF

Target information

Other names NF-L, NFL, 68 kDa neurofilament protein, Neurofilament triplet L protein, Neurofilament light

polypeptide

UniProt ID P07196 Gene name **NEFL**

NCBI full gene name neurofilament light chain

Entrez gene ID 4747

Amino acids 543 (61.5kDa)

Isoforms NFL has no isoforms other than the canonical sequence **Expression** Expressed within neurones only throughout the body Subcellular expression Expressed within the cyotoskeleton and axons only

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

peripherin of neurofilaments. NFL 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 Has 7 phosphorylation sites, 2 glycosylation sites and 3 other modified residues. The high number of modifications phosphorylation sites makes NFL appear to run at a higher molecular weight in SDS-PAGE than it's

structure would predict.

Homology (compared to

human)

Similar proteins

Processing

Mouse and rat show 97.3% and 97.5% homology to human neurofilament L respectively.

The most similar proteins, assessed using BLAST, are alpha-internexin (52.2% identity), vimentin

(49.9% identity), neurofilament M (44.4% identity) and neurofilament H (44.9% identity).

Epitope homology (between

species)

Human Neurofilament L has 100% homology wheras rat and mouse have 90% homology with the

epitope sequence.

Epitope homology (other

proteins)

Transcription initiation factor TFIID subunit 1 (212.7kDa) and kinesin like protein KIF11 (119.1kDa) show 80% and 88.9% homology with the epitope sequence for HB6433. Neither of these proteins have

been identified as showing reactivity with HB6433 during QC.

Storage & Handling

Storage instructions

-20°C

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

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

Yuan A et al (2015) Molecular Psychiatry 20(8)

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Neurofilament light chain as a biomarker in neurological disorders

Gaetani L et al (2019) J Neurol Neurosurg Psychiatry 90(8)

PubMedID 30967444

Serum neurofilament light levels in normal aging and their association with morphologic brain changes

Khalil M et al (2020) Nature Communications 11(1) **PubMedID** 32041951