

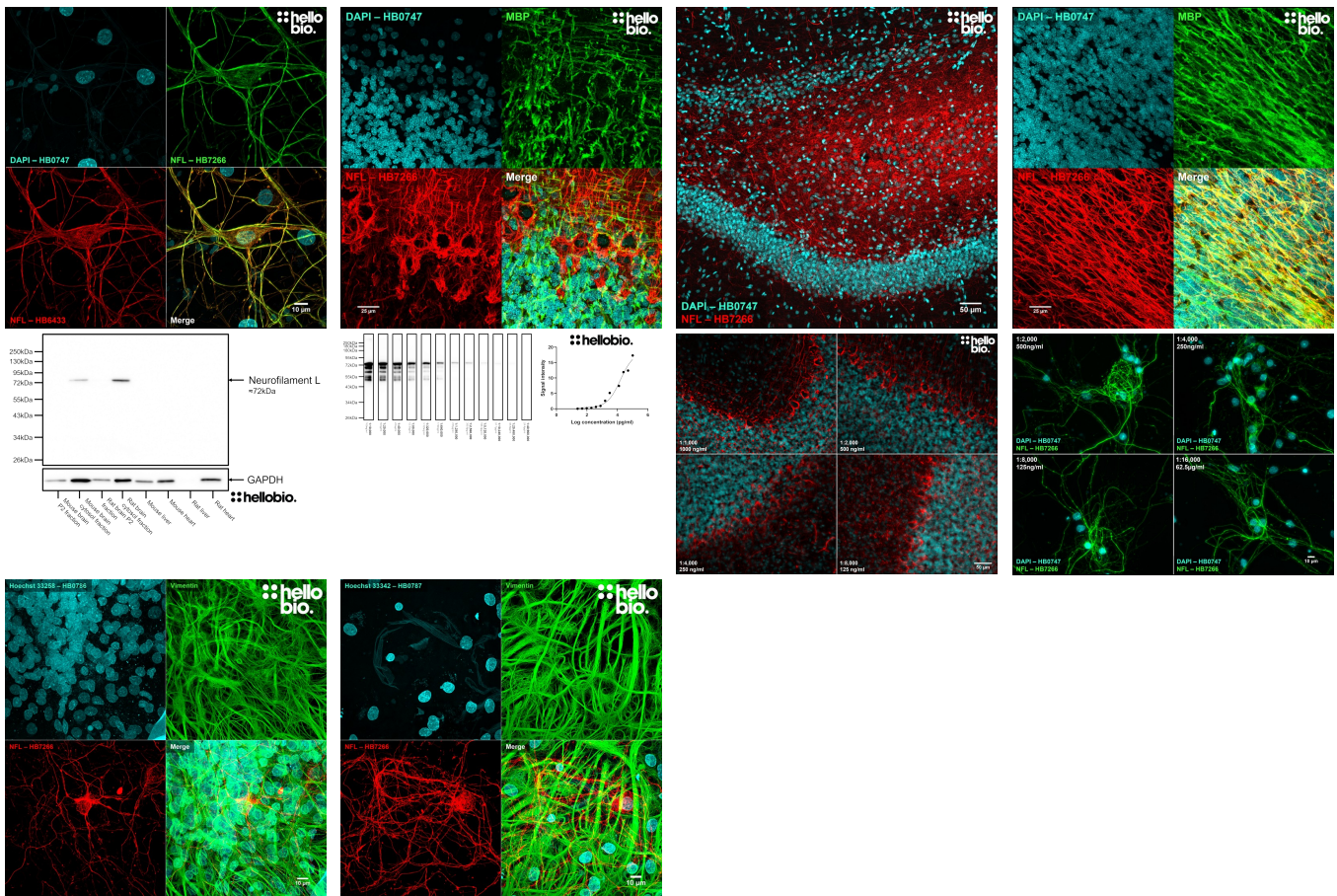
## DATASHEET

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

#### Product overview

<b>Name</b>	Recombinant Anti-Neurofilament L (NF-L) antibody ValidAb™
<b>Cat No</b>	HB7266
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal
<b>Target</b>	Neurofilament L
<b>Description</b>	Recombinant antibody to Neurofilament L - neurofilament component expressed in neurones. Part of the ValidAb™ range of highly validated, data-rich antibodies.

#### Validation data



#### Product information

<b>Immunogen</b>	Recombinant human NFL
<b>Clone number</b>	NF36
<b>Isotype</b>	IgG
<b>Purification</b>	Protein A affinity chromatography
<b>Concentration</b>	1mg/ml
<b>Formulation</b>	Lyophilised. When reconstituted contains PBS with 0.09% sodium azide and 1% recombinant albumin

Predicted species reactivity	Mouse, Rat, Human
Tested species reactivity	Mouse, Rat

---

## Tested applications

Applications	ICC, WB, IHC(IF)
Western blot optimal concentration	1ng/ml (1:1,000,000) as tested in rat brain cytosol fraction
IHC(IF) optimal concentration	0.5µg/ml (1:2,000) as tested in 4% PFA fixed free-floating 40µm rat cerebellum sections.
ICC optimal concentration	0.25µg/ml (1:4,000) as tested in mixed hippocampal/cortical cultured rat neurones
Positive control	Neurofilament L is highly expressed in neural tissue and also found in HEK293 cells.
Negative control	Any tissue not of neural origin and nearly all cell lines.
Open data link	Please follow this <a href="#">link to OSF</a>

---

## 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 cytoskeleton and axons only
Processing	The leading methionine is removed to leave the mature polypeptide chain.
Post translational modifications	Has 7 phosphorylation sites, 2 glycosylation sites and 3 other modified residues. The high number of 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)	Has 7 phosphorylation sites, 2 glycosylation sites and 3 other modified residues. The high number of phosphorylation sites makes NFL appear to run at a higher molecular weight in SDS-PAGE than it's structure would predict.
Similar proteins	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).

---

## Storage & Handling

Storage instructions	-20 °C then use reconstitution advice
Handling	Upon receipt store at either -20 °C or -80 °C. When ready to use there are three options:

- Reconstitute with 100µl dH<sub>2</sub>O and store at 4 °C
- Reconstitue with 50µl dH<sub>2</sub>O and 50µl glycerol then store at -20 °C
- Reconstitue with 100µl dH<sub>2</sub>O, aliquot then snap freeze and store at -80 °C

For more information [read our guide](#) on the best care for your product. Take care when opening as the precipitate is extremely light and can easily be lost if disturbed. When reconstituting make sure that the antibody is thoroughly dissolved by pipetting up and down before giving the antibody a brief spin at 10,000g to make sure that all material is recovered and at the bottom of the tube.

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

---

## References

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

Khalil et al (2020) Nature Communications 11(1)

PubMedID [32041951](#)

### **Neurofilament light chain as a biomarker in neurological disorders.**

Gaetani L et al (2019) Journal of neurology, neurosurgery, and psychiatry 90

**PubMedID** [30967444](#)

### **Neurofilaments and Neurofilament Proteins in Health and Disease.**

Yuan A et al (2017) Cold Spring Harbor perspectives in biology 9

**PubMedID** [28373358](#)

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

Yuan A et al (2015) Molecular psychiatry 20

**PubMedID** [25869803](#)

### **Neurofilaments at a glance.**

Yuan A et al (2012) Journal of cell science 125

**PubMedID** [22956720](#)

---