

Neurofilament L

Cat.No. 171 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: yes ICC: 1 : 500 IHC: 1 : 200 IHC-P/FFPE: 1 : 200
Immunogen	Recombinant protein corresponding to AA 1 to 376 from human Neurofilament L (UniProt Id: P07196) with AA 200-292 missing. Immunogen corresponds to AA 1 to 284 in AAH66952.1
Reactivity	Reacts with: human (P07196), rat (P19527), mouse (P08551). Other species not tested yet.
Specificity	Specific for neurofilament L.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Neurofilaments are exclusively expressed in nerve cells and are the major structural component of large-diameter myelinated axons. They are predominately composed of three proteins, Neurofilament H, L and M and are among the most highly phosphorylated neuronal proteins.

Selected References SYSY Antibodies

Conditional deletion of L1CAM in human neurons impairs both axonal and dendritic arborization and action potential generation.

Patzke C, Acuna C, Giam LR, Wernig M, Südhof TC

The Journal of experimental medicine (2016) 213(4): 499-515. **WB, ICC; tested species: mouse**

Impaired Neurofilament Integrity and Neuronal Morphology in Different Models of Focal Cerebral Ischemia and Human Stroke Tissue.

Mages B, Aleithe S, Altmann S, Blietz A, Nitzsche B, Barthel H, Horn AKE, Hobusch C, Härtig W, Krueger M, Michalski D, et al.

Frontiers in cellular neuroscience (2018) 12: 161. **WB, IHC; tested species: human,mouse,rat**

Gene Dosage Dependent Aggravation of the Neurological Phenotype in the 5XFAD Mouse Model of Alzheimer's Disease.

Richard BC, Kurdakova A, Baches S, Bayer TA, Weggen S, Wirths O

Journal of Alzheimer's disease : JAD (2015) 45(4): 1223-36. **IHC-P**

Neuropathological findings suggestive for a stroke in an alpaca (Vicugna pacos).

Schöniger S, Schütze E, Michalski D, Puchta J, Kaiser M, Härtig W

Acta veterinaria Scandinavica (2019) 61(1): 1. **IHC**

MACF1 links Rapsyn to microtubule- and actin-binding proteins to maintain neuromuscular synapses.

Oury J, Liu Y, Töpf A, Todorovic S, Hoedt E, Preethish-Kumar V, Neubert TA, Lin W, Lochmüller H, Burden SJ

The Journal of cell biology (2019) : . **IHC; tested species: mouse**

Glyoxal as an alternative fixative to formaldehyde in immunostaining and super-resolution microscopy.

Richter KN, Revelo NH, Seitz KJ, Helm MS, Sarkar D, Saleeb RS, D'Este E, Eberle J, Wagner E, Vogl C, Lazaro DF, et al.

The EMBO journal (2018) 37(1): 139-159. **ICC; tested species: mouse**

Up-regulation of neurofilament light chains is associated with diminished immunoreactivities for MAP2 and tau after ischemic stroke in rodents and in a human case.

Härtig W, Krueger M, Hofmann S, Preißler H, Märkel M, Frydrychowicz C, Mueller WC, Bechmann I, Michalski D

Journal of chemical neuroanatomy (2016) 78: 140-148. **IHC**

Increasing MuSK activity delays denervation and improves motor function in ALS mice.

Pérez-García MJ, Burden SJ

Cell reports (2012) 2(3): 497-502. **IHC**

Differential antiapoptotic effect of erythropoietin on undifferentiated and retinoic acid-differentiated SH-SY5Y cells.

Wenker SD, Chamorro ME, Vota DM, Callero MA, Vittori DC, Nesse AB

Journal of cellular biochemistry (2010) 110(1): 151-61. **ICC**

Topoisomerase IIβ Selectively Regulates Motor Neuron Identity and Peripheral Connectivity through Hox/Pbx-Dependent Transcriptional Programs.

Edmond M, Hanley O, Philippidou P

eNeuro (2012) 4(6): . **IHC; tested species: mouse**

Selected General References

New movements in neurofilament transport, turnover and disease.

Barry DM, Millecamps S, Julien JP, Garcia ML

Experimental cell research (2007) 313(10): 2110-20.

Regulation between O-GlcNAcylation and phosphorylation of neurofilament-M and their dysregulation in Alzheimer disease.

Deng Y, Li B, Liu F, Iqbal K, Grundke-Iqbal I, Brandt R, Gong CX

FASEB journal : official publication of the Federation of American Societies for Experimental Biology (2008) 22(1): 138-45.

CSF neurofilament proteins in the differential diagnosis of dementia.

de Jong D, Jansen RW, Pijnenburg YA, van Geel WJ, Borm GF, Kremer HP, Verbeek MM

Journal of neurology, neurosurgery, and psychiatry (2007) 78(9): 936-8.

14-3-3 protein binds to the low molecular weight neurofilament (NFL) mRNA 3' UTR.

Ge WW, Volkening K, Leystra-Lantz C, Jaffe H, Strong MJ

Molecular and cellular neurosciences (2007) 34(1): 80-7.

Differential subcellular localization of phosphorylated neurofilament and tau proteins in degenerating neurons of the human entorhinal cortex.

Porchet R, Probst A, Dráberová E, Dráber P, Riederer IM, Riederer BM

Neuroreport (2003) 14(7): 929-33.

Influence of the axotomy to cell body distance in rat rubrospinal and spinal motoneurons: differential regulation of GAP-43, tubulins, and neurofilament-M.

Fernandes KJ, Fan DP, Tsui BJ, Cassar SL, Tetzlaff W

The Journal of comparative neurology (1999) 414(4): 495-510.