

Neurofilament NF-H Polyclonal Antibody

Product Specifications	
Catalog Number:	NBA-137
Host:	Rabbit
Species Reactivity:	Human, mouse, rat
Applications: <i>The optimal dilution for a specific application must be determined by the investigator</i>	WB: 1:1000-1:2500 ICC: 1:100-1:500
Predicted m.w:	~200-220 kDa
Purification:	None
Format:	Whole rabbit antisera containing 50% glycerol, 0.01% thimerosal, 1.0 mg/mL BSA
Storage: <i>Shipping conditions may differ from the recommended storage temperature</i>	Store at -20°C
Immunogen:	Purified native bovine Neurofilament NF-H protein
Related Products:	
NBA-140	Neurofilament NF-M Monoclonal Antibody (3H11)
SAB-301	Goat anti-Rabbit IgG Polyclonal Antibody, AP Conjugate
SAB-303	Goat anti-Rabbit IgG Polyclonal Antibody, Biotin Conjugate
SAB-300	Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate

Background:

Neuron-specific neurofilaments belong to the intermediate filament protein family, also known as 10nm filaments¹. As major constituents of the axonal cytoskeleton, neurofilaments contain heteropolymers of three major proteins: 200 kDa heavy molecular weight protein NF-H, 160 kDa medium molecular weight protein NF-M, and 68 kDa light molecular weight protein NF-L, with the ratio of each changing during neuronal development. All three proteins contain globular head and tail domains flanking a central α -helical domain. The α -helical domain contains a hydrophobic heptad repeat required for assembly. NF-H is phosphorylated on serine residues within n-KSP-c (lysine-serine-proline) repeats found in the C-terminal tail domain². The tail domain contains 42-51 KSP repeats, and the number of repeats varies among vertebrates. While phosphorylated forms of NF-H are normally restricted to axons and less phosphorylated forms found in dendrites, phosphorylated NF-H appears with NAP4 in dendritic and perikaryal neurofilaments after damage or during disease progression. Phosphorylation of the NF-H tail domain modulates neurofilament transport, dynamics and organization within the axon². An accumulation of neurofilament proteins and/or mutations in one of the three major proteins occur during the progression of numerous neurological diseases, including ALS³.

References:

1. Lee, M.K. and Cleveland, D.W. (1996) *Annu Rev Neurosci.* **19**, 187-217.
2. Shea, T.B. (2000) *J Neurocytol.* **29**, 873-887.
3. Al-Chalabi, A., et al. (1999) *Hum Mol Genet.* **8**, 157-164.