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Product datasheet for TA336622

Neurofilament (NEFM) Chicken Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	WB: 1:10000, IF: 1:2000
Reactivity:	Human, Mouse, Rat, Chicken, Feline, Fish
Host:	Chicken
Isotype:	IgY
Clonality:	Polyclonal
Immunogen:	The C-terminal extension of rat Neurofilament Medium protein (the so-called KE segment) [UniProt# P12839]
Formulation:	PBS, 0.03% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Ammonium sulfate precipitation
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	160 kDa
Gene Name:	neurofilament, medium polypeptide
Database Link:	NP_005373 Entrez Gene 18040 MouseEntrez Gene 24588 RatEntrez Gene 4741 Human P07197

View online »

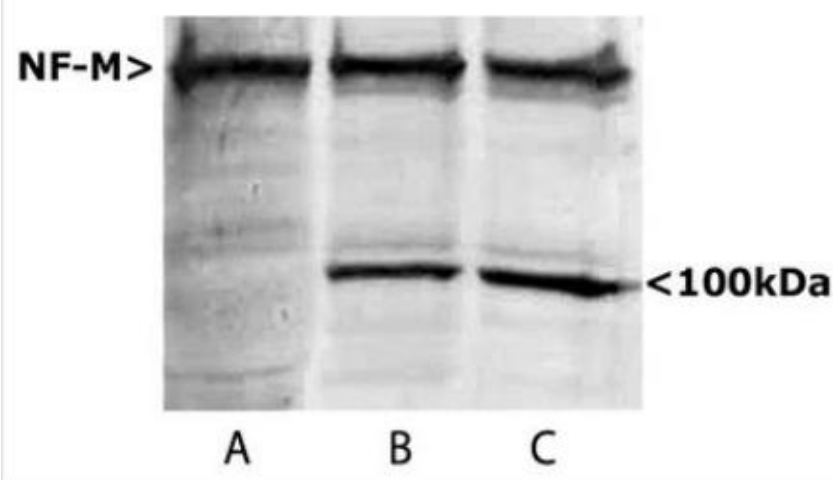
Background: Neuronal intermediate filaments (NIF) are type-IV intermediate filaments found specifically on neurons where they play key role in maintaining neuronal morphology as well as in regenerating myelinated axons. NIF contain three subunits: a light polypeptide (NEFL/NFL), a medium polypeptide (NEFM/NFM), and a heavy polypeptide (NEFH/NFH), with molecular weights of 68, 160, and 212 kD respectively. Mature NIFs are heteropolymers with about 4:2:1 stoichiometric ratio of NEFL: NEFM: NEFH and also contain a fourth type-IV intermediate filament (IF) subunit, alpha-internexin. NEFM is essential to cross-bridge formation, stabilization, and longitudinal extension of filamentous network and is more critical than NEFH in regulating NIF's structure and function. NEFM is crucial for the acquisition of normal axonal caliber in response to a myelin-dependent "outside-in" trigger for radial axonal growth and removal of the tail domain as well as lysine-serine-proline (KSP) repeats of NEFM, but not NEFH, produces axons with impaired radial growth and reduced conduction velocities. Moreover, mutations of NEFM have been associated with CNS/PNS disorders such as ALS, Parkinson's disease etc., and an imbalance in NEFM's O-GlcNAcylation - phosphorylation regulation plays a crucial role in in Alzheimer disease.

Synonyms: NEF3; NF-M; NFM

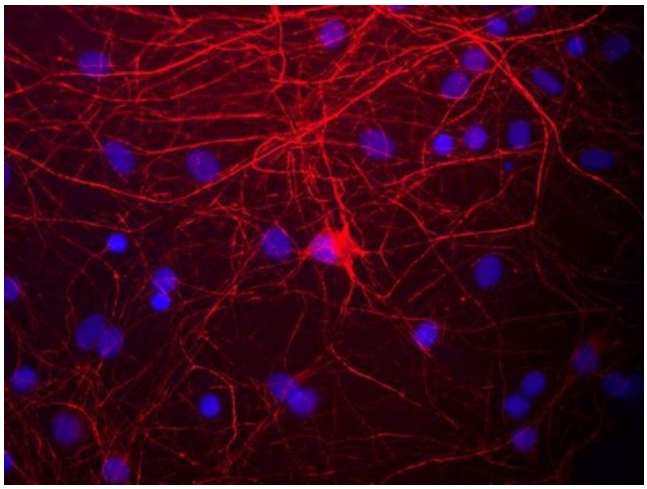
Note: This 160kDa Neurofilament Medium antibody is useful for Immunocytochemistry/Immunofluorescence and Western blot. In Western blot this antibody detects a band at ~145-170kDa.

Protein Pathways: Amyotrophic lateral sclerosis (ALS)

Product images:



Western Blot: 160kDa Neurofilament Medium Antibody TA336622 - Western blots of homogenates of SH-SY5Y cells, a human neuroblastoma cell line. Lane A shows blotting with TA336622, which reveals a strong NF-M band at ~150kDa. Lanes B and C are homogenates



Immunocytochemistry/Immunofluorescence: 160kDa Neurofilament Medium Antibody TA336622 - View of mixed neuron/glial cultures stained with TA336622 (red). The NF-M protein is assembled into neurofilaments which are found throughout the axons, dendrites an