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Product datasheet for TA336604

Neurofilament (NEFM) Mouse Monoclonal Antibody [Clone ID: 3H11]

Product data:

Product Type:	Primary Antibodies
Clone Name:	3H11
Applications:	IF, WB
Recommended Dilution:	WB: 1:2500, IF: 1:500, IHC: 1:500, IHC-P: 1:500
Reactivity:	Human, Mouse, Rat, Mammalian, Avian
Host:	Mouse
Isotype:	IgG1, kappa
Clonality:	Monoclonal
Immunogen:	Recombinant rat Neurofilament Medium fusion protein corresponding to the C-terminus [UniProt# P12839]
Formulation:	Preservative: 0.05% Sodium Azide. Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Ascites
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 »

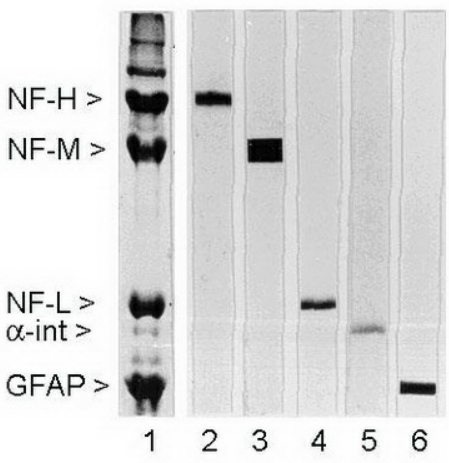
Background: Neuronal intermediate filaments (NIF) are type-IV intermediate filaments found specifically on neurons where they play key role in maintaining neuronal morphology as well as in regenerating myelinated axons. NIF contain three subunits: a light polypeptide (NEFL/NFL), a medium polypeptide (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

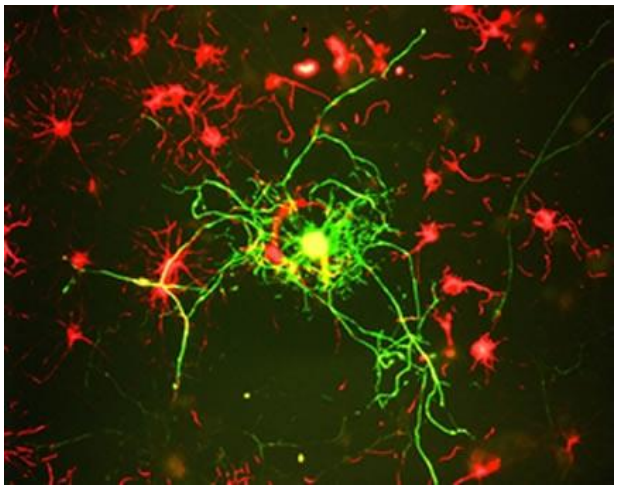
Note: This 160kDa Neurofilament Medium antibody is useful for Immunocytochemistry/Immunofluorescence, Immunohistochemistry on paraffin-embedded sections and Western blot. *The investigator should determine the optimal dilution for a specific application.

Protein Pathways: Amyotrophic lateral sclerosis (ALS)

Product images:



Western Blot: 160kDa Neurofilament Medium Antibody (3H11) TA336604 - Rat spinal cord homogenate showing the major intermediate filament proteins of the nervous system (lane 1). The remaining lanes show blots of this material stained with various antibo



Immunocytochemistry/Immunofluorescence: 160kDa Neurofilament Medium Antibody (3H11) TA336604 - Culture of adult neural cells grown as described (2). Mature neurons can be identified by their morphology and because they stain strongly with antibodies to