ARG52350
anti-Neurofilament NF-M antibody [3H11]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [3H11] recognizes Neurofilament NF-M
Tested Reactivity	Ms, Rat, Cow
Predict Reactivity	Hu, Chk
Tested Application	ICC/IF, IHC-Fr, WB
Host	Mouse
Clonality	Monoclonal
Clone	3H11
Isotype	IgG1
Target Name	Neurofilament NF-M
Species	Rat
Immunogen	Preparation containing the extreme C-terminus expressed in and purified from E. Coli
Conjugation	Un-conjugated
Alternate Names	Neurofilament medium polypeptide; Neurofilament 3; Neurofilament triplet M protein; NFM; NF-M; 160 kDa neurofilament protein; NEF3

Application Instructions

Application table

Application	Dilution
ICC/IF	1:100 - 1:500
IHC-Fr	1:100 - 1:500
WB	1:1000 - 1:5000

Application Note

Specific for the ~145k neurofilament M protein.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

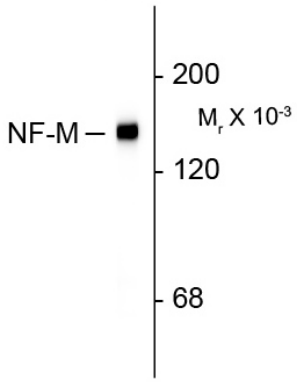
Form	Liquid
Purification	Total IgG fraction
Buffer	Total IgG fraction and 10 mM Sodium azide
Preservative	10 mM Sodium azide
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

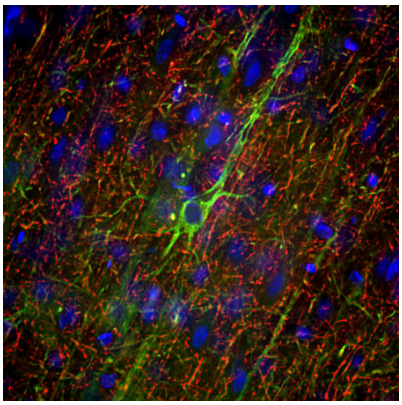
Database links	GeneID: 18040 Mouse GeneID: 24588 Rat Swiss-port # P08553 Mouse Swiss-port # P12839 Rat
Gene Symbol	NEFM
Gene Full Name	neurofilament, medium polypeptide
Background	Neurofilaments are the 10nm or intermediate filament proteins found specifically in neurons, and are composed predominantly of three major proteins called NF-L, NF-M and NF-H . NF-M is the neurofilament middle or medium molecular weight polypeptide and runs on SDS-PAGE gels at 145-160 kDa, with some variability across species boundaries. Antibodies to NF-M are useful for identifying neuronal cells and their processes in tissue sections and in tissue culture. NF-M antibodies can also be useful to visualize neurofilament accumulations seen in many neurological diseases, such as Amyotrophic Lateral Sclerosis (Lou Gehrig's disease) and Alzheimer's disease .
Highlight	Related products: Neurofilament NF M antibodies; Neurofilament NF M Duos / Panels; Anti-Mouse IgG secondary antibodies; Related news: Neuronal Development Marker
Research Area	Controls and Markers antibody; Developmental Biology antibody; Neuroscience antibody; Signaling Transduction antibody; Intermediate Neurofilament antibody
Calculated Mw	102 kDa
PTM	There are a number of repeats of the tripeptide K-S-P, NFM is phosphorylated on a number of the serines in this motif. It is thought that phosphorylation of NFM results in the formation of interfilament cross bridges that are important in the maintenance of axonal caliber. Phosphorylation seems to play a major role in the functioning of the larger neurofilament polypeptides (NF-M and NF-H), the levels of phosphorylation being altered developmentally and coincidentally with a change in the neurofilament function. Phosphorylated in the head and rod regions by the PKC kinase PKN1, leading to the inhibition of polymerization.

Images



ARG52350 anti-Neurofilament NF-M antibody [3H11] WB image

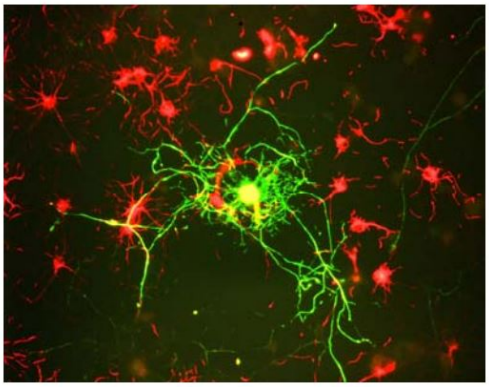
Western Blot: rat cortex lysate showing specific immunolabeling of the ~145k NF-M protein stained with ARG52350 anti-Neurofilament NF-M antibody [3H11]



ARG52350 anti-Neurofilament NF-M antibody [3H11] IHC-Fr image

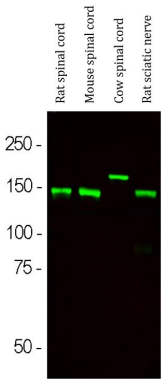
Immunohistochemistry: Frozen section of adult Rat frontal cortex tissue stained with ARG52350 anti-Neurofilament NF-M antibody [3H11] (green) at 1:5000 dilution, and costained with ARG52347 anti-Neurofilament NF-H antibody (red) at 1:5000 dilution. Following transcardial perfusion of Rat with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 µM, and free-floating sections were stained with above antibodies.

Clone 3H11 labels neuron cell bodies and dendrites of pyramidal neurons, as well as dendrites and axons of other neuronal cells, while the NF-H antibody stains the network of neuronal axons only.



ARG52350 anti-Neurofilament NF-M antibody [3H11] ICC/IF image

Immunofluorescence: cultured rat neurons stained with ARG52350 anti-Neurofilament NF-M antibody [3H11] showing labeling of NF-M (green) in mature neurons.



ARG52350 anti-Neurofilament NF-M antibody [3H11] WB image

Western blot: Rat spinal cord, Mouse spinal cord, Cow spinal cord and Rat sciatic nerve lysates stained with ARG52350 anti-Neurofilament NF-M antibody [3H11] (green) at 1:10000 dilution.