

ARG63076 anti-Neurofilament NF-M antibody [NF-09]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [NF-09] recognizes Neurofilament NF-M
Tested Reactivity	Hu, Ms, Rat, Mamm
Tested Application	ICC/IF, IHC-P, WB
Specificity	The clone NF-09 reacts with both phosphorylated and non-phosphorylated form of medium neurofilament protein (160 kDa) of various species.
Host	Mouse
Clonality	Monoclonal
Clone	NF-09
Isotype	IgG2a
Target Name	Neurofilament NF-M
Species	Pig
Immunogen	Pellet of porcine brain cold stable proteins after depolymerization of microtubules.
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	Assay-dependent
	IHC-P	Assay-dependent
	WB	1 - 2 µg/ml
Application Note	ICC/IF: Carnoys fixative 2 x 3 min, blocking 1% glycine + 0.2% gelatin 10 min. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	ICC/IF: Neuro2A	

Properties

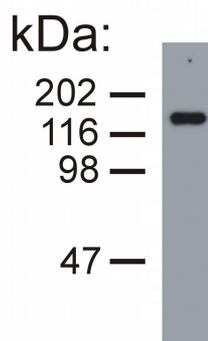
Form	Liquid
Purification	Purified from ascites by protein-A affinity chromatography.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4) and 15 mM Sodium azide
Preservative	15 mM Sodium azide

Concentration	1 mg/ml
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

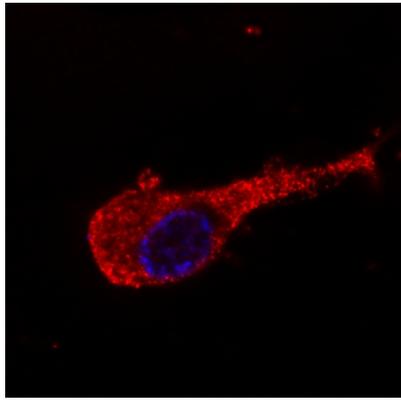
Background	Neurofilaments (NFs) are a type of intermediate filament (IF) expressed almost exclusively in neuronal cells, and in those cells most prominently in large axons. NFs in most vertebrates are composed of three different polypeptide chains with different molecular weights – neurofilament medium protein (NF-M), high (NF-H) and light protein (NF-L), which share sequence and structural similarity in a coiled-coil core domain, but differ in the length and sequence of their N-termini and more dramatically of their C-termini which in the case of NF-M and NF-H form the flexible extensions that link NFs to each other and to other elements in the cytoplasm. NF-M protein tail-mediated interactions of neurofilaments are critical for size and cytoskeletal architecture of axons, and are mediated, in part, by the highly phosphorylated tail domain of this protein. NF-M phosphorylation and O-GlcNAcylation are regulated reciprocally and affect its translocation and filament formation and function. Antibodies to the various neurofilament subunits are very useful cell type markers since the proteins are among the most abundant of the nervous system, are expressed only in neurons and are biochemically very stable.
Research Area	Controls and Markers antibody; Developmental Biology antibody; Neuroscience antibody; Signaling Transduction antibody; Intermediate Neurofilament antibody
Calculated Mw PTM	102 kDa 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



ARG63076 anti-Neurofilament NF-M antibody [NF-09] WB image

Western blot: Porcine brain lysate (under reducing conditions) stained with ARG63076 anti-Neurofilament NF-M antibody [NF-09].



ARG63076 anti-Neurofilament NF-M antibody [NF-09] ICC/IF image

Immunofluorescence: Murine Neuro2A cells stained with ARG63076 anti-Neurofilament NF-M antibody [NF-09] (green).
Cell nuclei was stained with DAPI (blue).