ARG11132
anti-Neurofilament NF-H phospho (KSP site) antibody [9B12]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [9B12] recognizes Neurofilament NF-H phospho (KSP site)
Tested Reactivity	Hu, Ms, Rat, Cow
Tested Application	ICC/IF, IHC-Fr, WB
Specificity	This antibody recognizes the phosphorylated NF-H KSP sequences. In some species there is some cross-reactivity with the phosphorylated KSP sequences found in the related neurofilament subunit NF-M.
Host	Mouse
Clonality	Monoclonal
Clone	9B12
Isotype	IgG2b
Target Name	Neurofilament NF-H
Species	Bovine
Immunogen	Native Neurofilament NF-H purified from bovine spinal cord, binding to phosphorylated KSP sequences.
Conjugation	Un-conjugated
Alternate Names	Neurofilament heavy polypeptide; 200 kDa neurofilament protein; NF-H; Neurofilament triplet H protein; NFH

Application Instructions

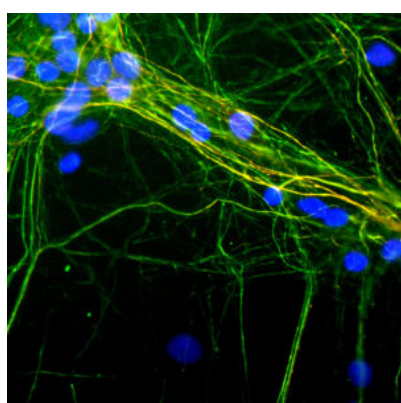| Application table	Application	Dilution
	ICC/IF	1:1000
	IHC-Fr	1:1000
	WB	1:10000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Purified
Buffer	PBS, 5 mM Sodium azide and 50% Glycerol.
Preservative	5 mM Sodium azide
Stabilizer	50% Glycerol
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. 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

| Gene Symbol	NEFH
Gene Full Name	neurofilament, heavy polypeptide
Background	Neurofilaments are type IV intermediate filament heteropolymers composed of light, medium, and heavy chains. Neurofilaments comprise the axoskeleton and functionally maintain neuronal caliber. They may also play a role in intracellular transport to axons and dendrites. This gene encodes the heavy neurofilament protein. This protein is commonly used as a biomarker of neuronal damage and susceptibility to amyotrophic lateral sclerosis (ALS) has been associated with mutations in this gene. [provided by RefSeq, Oct 2008]
Function	Neurofilaments usually contain three intermediate filament proteins: L, M, and H which are involved in the maintenance of neuronal caliber. NF-H has an important function in mature axons that is not subserved by the two smaller NF proteins. [UniProt]
Calculated Mw	112 kDa
PTM	There are a number of repeats of the tripeptide K-S-P, NFH is phosphorylated on a number of the serines in this motif. It is thought that phosphorylation of NFH 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. [UniProt]
Cellular Localization	Cytoplasm. [UniProt]

Images

ARG11132 anti-Neurofilament NF-H phospho (KSP site) antibody [9B12] ICC/IF image

Immunofluorescence: E20 rat cortex cells stained with ARG11132 anti-Neurofilament NF-H phospho (KSP site) antibody [9B12] (red) at 1:5000 dilution, and co-stained with ARG10732 anti-Neurofilament NF-L antibody antibody (green) at 1:5000 dilution. DAPI (blue) for nuclear staining.
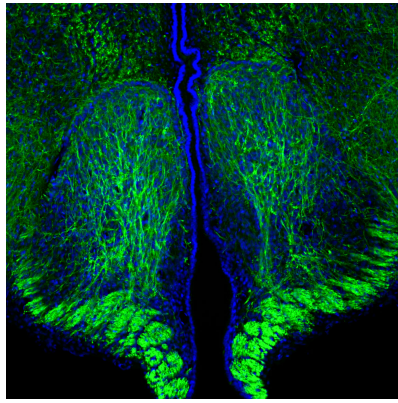
ARG11132 anti-Neurofilament NF-H phospho (KSP site) antibody [9B12] IHC-Fr image

Immunohistochemistry: Frozen section of Rat brain coronal tissue of the third ventricle stained with ARG11132 anti-Neurofilament NF-H phospho (KSP site) antibody [9B12] (green) at 1:5000 dilution. Hoechst (blue) for nuclear staining. (Sample preparation: Following transcardial perfusion with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 μM, and free-floating sections were stained with above antibody.).
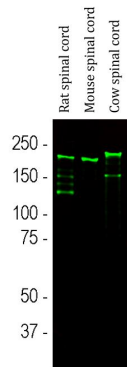
ARG11132 anti-Neurofilament NF-H phospho (KSP site) antibody [9B12] WB image

Western blot: Rat spinal cord, Mouse spinal cord and Cow spinal cord lysates stained with ARG11132 anti-Neurofilament NF-H phospho (KSP site) antibody [9B12] at 1:10000 dilution.

Smaller proteolytic fragments of NF-H are also detected in some preparations.