abcam

Product datasheet

Anti-Neurofilament heavy polypeptide antibody [RNF402] ab3966

★★★★☆ **1 Abreviews**   **8 References**   1 Image

Overview

Product name	Anti-Neurofilament heavy polypeptide antibody [RNF402]
Description	Mouse monoclonal [RNF402] to Neurofilament heavy polypeptide
Host species	Mouse
Specificity	Axonal Marker. This antibody reacts with the intermediate filament protein of central and periferal nerve cells. In Western blotting this antibody is reactive with the Neurofilament heavy polypeptide protein only. This antibody reacts with both the phosphorylated and non-phosphorylated isoforms.
Tested applications	**Suitable for:** IHC-Fr
Species reactivity	**Reacts with:** Rat
Immunogen	Tissue, cells or virus corresponding to Cow Neurofilament heavy polypeptide. Neurofilament preparation of calf brain tissue. Database link: **P12036**
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.
	If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.09% Sodium azide Constituent: PBS
Purity	Immunogen affinity purified
Clonality	Monoclonal
Clone number	RNF402

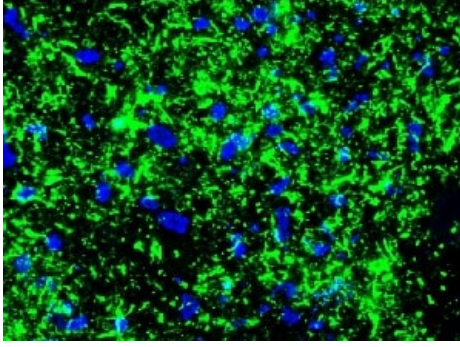| Myeloma	Sp2/0-Ag14
Isotype	IgM

Applications

The Abpromise guarantee   Our **Abpromise guarantee** covers the use of ab3966 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr	★★★★☆ (1)	1/10 - 1/100.

Target

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.
Involvement in disease	Defects in NEFH are a cause of susceptibility to amyotrophic lateral sclerosis (ALS) [MIM:105400]. ALS is a neurodegenerative disorder affecting upper and lower motor neurons, and resulting in fatal paralysis. Sensory abnormalities are absent. Death usually occurs within 2 to 5 years. The etiology is likely to be multifactorial, involving both genetic and environmental factors.
Sequence similarities	Belongs to the intermediate filament family.
Post-translational modifications	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 coincident with a change in the neurofilament function. Phosphorylated in the Head and Rod regions by the PKC kinase PKN1, leading to inhibit polymerization.

Images

Immunohistochemistry on frozen section of rat brain labeling Neurofilament heavy polypeptide with ab3966.

Immunohistochemistry (Frozen sections) - Anti-Neurofilament heavy polypeptide antibody [RNF402] (ab3966)

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