

Product datasheet

Anti-Neurofilament heavy polypeptide antibody [RNF404] αb8972

[1 References](#) [2 Images](#)

Overview

Product name	Anti-Neurofilament heavy polypeptide antibody [RNF404]
Description	Mouse monoclonal [RNF404] to Neurofilament heavy polypeptide
Host species	Mouse
Specificity	Reacts with the intermediate filament protein of periferal and central nerve cells, corresponding in Western blotting with the 200 kDa protein. Specific for the phosphorylated isoform.
Tested applications	Suitable for: IHC-P
Species reactivity	Reacts with: Rat, Human
Immunogen	Tissue, cells or virus corresponding to Cow Neurofilament heavy polypeptide. Neurofilament preparation of calf brain tissue. Database link: <u>P12036</u>
General notes	<p>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.</p> <p>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</p>

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	Protein A purified
Clonality	Monoclonal
Clone number	RNF404
Myeloma	Sp2/0-Ag14

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab8972 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-P		1/50 - 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.

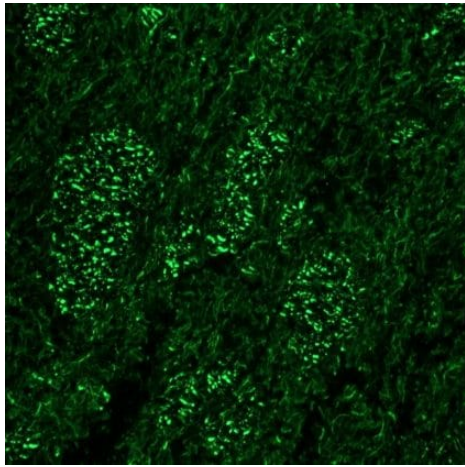
Sequence similarities

Belongs to the intermediate filament family.

Post-translational modifications

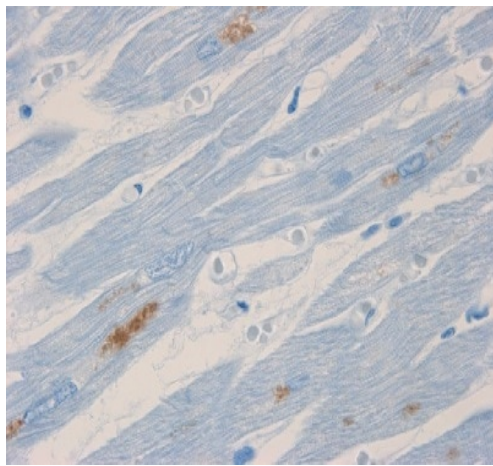
There are a number of repeats of the tripeptide K-S-P, NFH is phosphorylated on a number of the serines in this motif. It is thought that phosphorylation of NFH results in the formation of interfilament cross bridges that are important in the maintenance of axonal caliber. Phosphorylation seems to play 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



immunofluorescence staining of rat brain with ab8972 (1:100).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody [RNF404] (ab8972)



Immunohistochemistry on paraffin section of human heart

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody [RNF404] (ab8972)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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