abcam

Product datasheet

Anti-Neurofilament heavy polypeptide antibody [NF421] ab187374

2 References 4 Images

Overview

Product name	Anti-Neurofilament heavy polypeptide antibody [NF421]
Description	Mouse monoclonal [NF421] to Neurofilament heavy polypeptide
Host species	Mouse
Tested applications	**Suitable for:** WB, ICC, IHC-P
Species reactivity	**Reacts with:** Rat, Human **Predicted to work with:** Mouse, Chicken, Pig
Immunogen	Recombinant full length protein corresponding to Human Neurofilament heavy polypeptide aa 1-1026. Database link: **4744**
Positive control	IHC-P: Human and rat cerebellum tissues. ICC: HEK-293 cells. WB: Human brain tissue lysate.
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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 99% PBS, 0.05% BSA
Purity	Protein A purified
Purification notes	Purified by Protein A/G.
Clonality	Monoclonal

Clone number	NF421
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab187374 in the following tested applications.

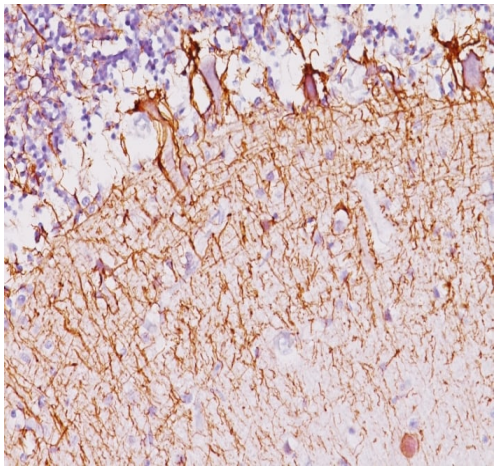
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 - 2 µg/ml. Predicted molecular weight: 112 kDa.
ICC		Use a concentration of 1 - 2 µg/ml.
IHC-P		Use a concentration of 1 - 2 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

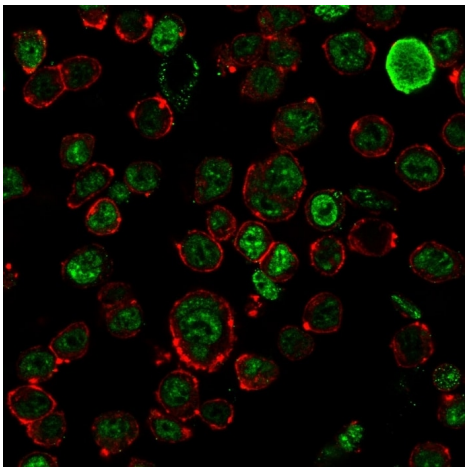
Function	Neurofilaments usually contain three intermediate filament proteins: L, M, and H which are involved in the maintenance of neuronal caliber. NF-H has an important function in mature axons that is not subserved by the two smaller NF proteins.
Involvement in disease	Defects in NEFH are a cause 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



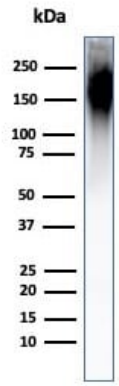
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody [NF421] (ab187374)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human cerebellum tissue labeling Neurofilament heavy polypeptide with ab187374 at 1 ug/ml.



Immunocytochemistry - Anti-Neurofilament heavy polypeptide antibody [NF421] (ab187374)

Immunocytochemistry analysis of HEK-293 (Human epithelial cell line from embryonic kidney) cells labeling Neurofilament heavy polypeptide with ab187374 at 1 ug/ml (green). Membrane stained with Phalloidin (red).

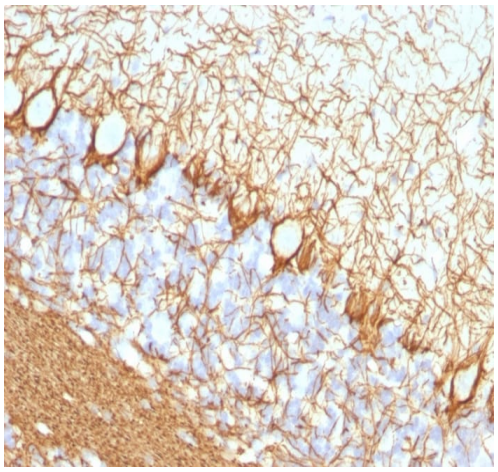


Western blot - Anti-Neurofilament heavy polypeptide antibody [NF421] (ab187374)

Anti-Neurofilament heavy polypeptide antibody [NF421] (ab187374) at 1 µg/ml + Human brain tissue lysate

Predicted band size: 112 kDa

Western blot analysis of human brain tissue lysate labeling Neurofilament heavy polypeptide with ab187374 at 1 ug/ml.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody [NF421] (ab187374)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat cerebellum tissue labeling Neurofilament heavy polypeptide with ab187374 at 1 ug/ml.

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