


## Product datasheet

# Anti-Neurofilament heavy polypeptide antibody [rNF421] $\alpha$ b234296

Recombinant

2 Images

### Overview

Product name	Anti-Neurofilament heavy polypeptide antibody [rNF421]
Description	Mouse monoclonal [rNF421] to Neurofilament heavy polypeptide
Host species	Mouse
Tested applications	<b>Suitable for:</b> IHC-P
Species reactivity	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat, Chicken, Pig 
Immunogen	Recombinant full length protein corresponding to Human Neurofilament heavy polypeptide. Database link: <a href="#">P12036</a>
Positive control	IHC-P: Human brain tissue.

### 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: PBS, 0.05% BSA
Purity	Protein A/G purified
Purification notes	Purified from Bioreactor Concentrate by Protein A/G.
Clonality	Monoclonal
Clone number	rNF421
Isotype	IgG1

### Applications

The **Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab234296 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		Use a concentration of 0.5 - 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. (Primary incubation for 30 min at room temperature).

## 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.

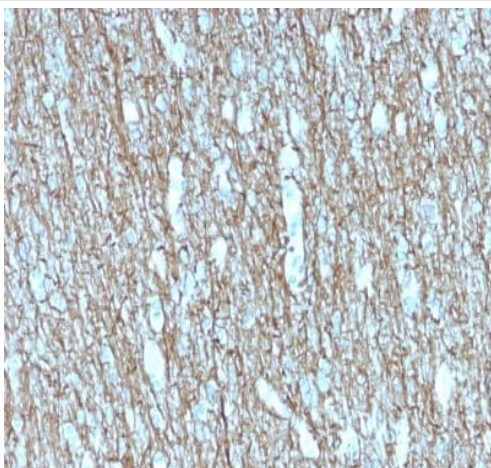
### Sequence similarities

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



Formalin-fixed, paraffin-embedded human brain tissue stained for Neurofilament heavy polypeptide using ab234296 at 1 µg/ml in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody [rNF421] (ab234296)

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Neurofilament heavy polypeptide antibody  
[rNF421] (ab234296)

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

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