

## Product datasheet

# Anti-Neurofilament heavy polypeptide antibody ab203039

3 Images

### Overview

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| <b>Product name</b>        | Anti-Neurofilament heavy polypeptide antibody                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>         | Rabbit polyclonal to Neurofilament heavy polypeptide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Host species</b>        | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Tested applications</b> | <b>Suitable for:</b> IHC-P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species reactivity</b>  | <p><b>Reacts with:</b> Mouse, Rat</p> <p><b>Predicted to work with:</b> Human </p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Immunogen</b>           | <p>Synthetic peptide within Human Neurofilament heavy polypeptide aa 5-55 conjugated to keyhole limpet haemocyanin. The exact sequence is proprietary.</p> <p>Sequence:</p> <p>GGADALLGAPFAPLHGGGSLHYALARKGGAGGTRSAAG<br/>SSSGFHSWTRTS V</p> <p>Database link: <a href="#">P12036</a></p> <p style="text-align: right;">  <a href="#">Run BLAST with</a>                 <a href="#">Run BLAST with</a> </p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Positive control</b>    | IHC-P: Mouse brain, rat brain and spinal cord tissues.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>General notes</b>       | <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. If you have any questions,</p> |

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, as well as customer reviews and Q&As.

## Properties

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|                             |                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>                 | Liquid                                                                                                                            |
| <b>Storage instructions</b> | 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. |
| <b>Storage buffer</b>       | Preservative: 0.09% Sodium azide<br>Constituents: 50% Glycerol, 1% BSA                                                            |
| <b>Purity</b>               | Protein A purified                                                                                                                |
| <b>Clonality</b>            | Polyclonal                                                                                                                        |
| <b>Isotype</b>              | IgG                                                                                                                               |

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab203039** 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       |           | 1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.<br>When using a fluorescent probe please use dilutions of 1/50 - 1/200. |

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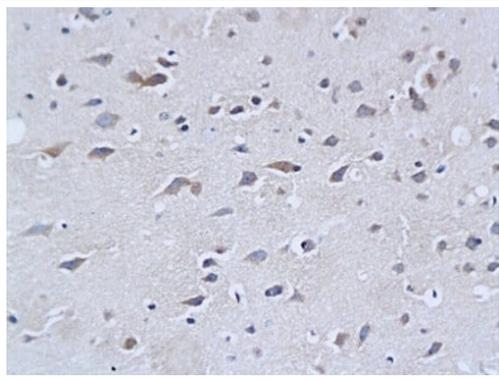
## Target

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|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Function</b>                         | 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.                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Involvement in disease</b>           | 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.                                                                                                                                                                                                                                            |
| <b>Sequence similarities</b>            | Belongs to the intermediate filament family.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Post-translational modifications</b> | 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. |

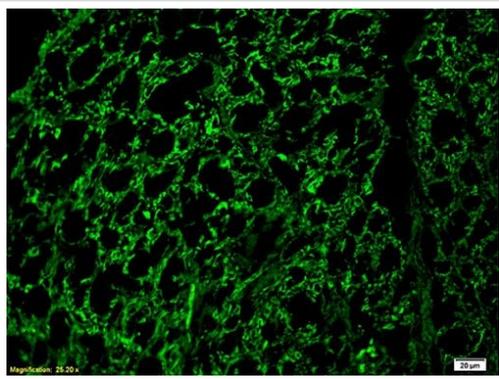
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## Images



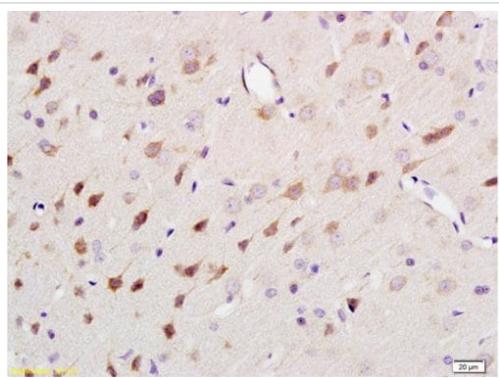
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody (ab203039)

Immunohistochemical analysis of formalin-fixed paraffin-embedded mouse brain tissue, labeling Neurofilament using ab203039 at a 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody (ab203039)

Immunohistochemical analysis of formalin-fixed paraffin-embedded rat spinal cord tissue, labeling Neurofilament using ab203039 at a 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament heavy polypeptide antibody (ab203039)

Immunohistochemical analysis of formalin-fixed paraffin-embedded rat brain tissue, labeling Neurofilament using ab203039 at a 1/200 dilution, followed by conjugation to the secondary antibody and DAB staining.

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

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