BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-Nefh Antibody Picoband®

Catalog Number: A05307

About Nefh

Neurofilaments are type IV intermediate filament heteropolymers composed of light, medium, and heavy chains. Neurofilaments comprise the axoskeleton and functionally maintain neuronal caliber. They may also play a role in intracellular transport to axons and dendrites. This gene encodes the heavy neurofilament protein. This protein is commonly used as a biomarker of neuronal damage and susceptibility to amyotrophic lateral sclerosis (ALS) has been associated with mutations in this gene.

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Overview

Product Name	Anti-Nefh Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Nefh Antibody Picoband® catalog # A05307. Tested in ELISA, Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P19246

Technical Details

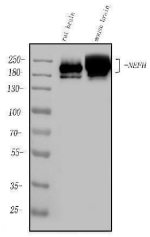
Immunogen	E.coli-derived mouse Nefh recombinant protein (Position: Y109-E466).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).

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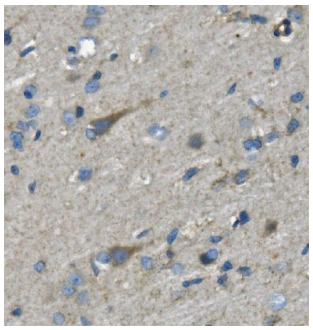
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Mouse ELISA, 0.1-0.5ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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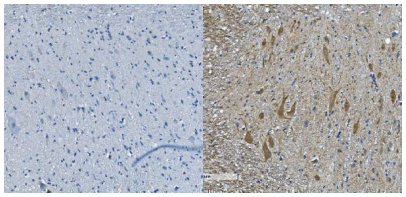
Anti-Nefh Antibody Picoband® (A05307) Images



Western blot analysis of Nefh using anti-Nefh antibody (A05307). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Nefh antigen affinity purified polyclonal antibody (Catalog # A05307) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Nefh at approximately 117-220KD. The expected band size for Nefh is at 117KD.



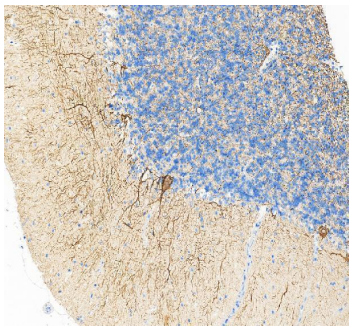
IHC analysis of Nefh using anti-Nefh antibody (A05307). Nefh was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Nefh Antibody (A05307) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



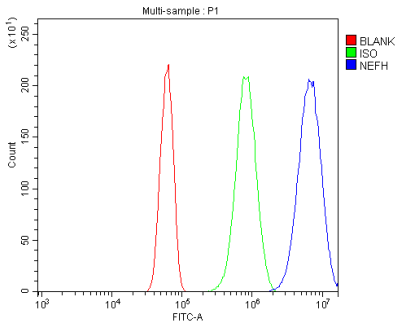
IHC analysis of Nefh using anti-Nefh antibody (A05307). Nefh was detected in paraffin-embedded section of mouse spinal cord tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Nefh Antibody (A05307) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

IHC analysis of Nefh using anti-Nefh antibody (A05307). Nefh was detected in a paraffin-embedded section of human cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Nefh Antibody (A05307) overnight at 4°C.

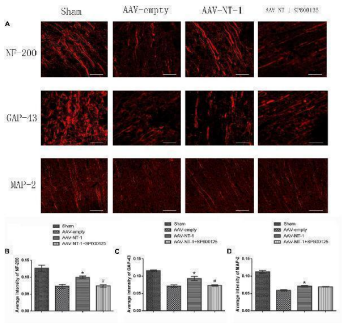
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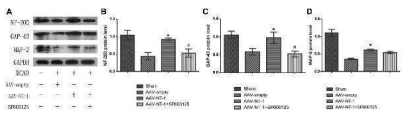
Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Flow Cytometry analysis of Neuro-2a cells using anti-Nefh antibody (A05307). Overlay histogram showing Neuro-2a cells stained with A05307 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Nefh Antibody (A05307, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Images of immunofluorescence staining in each group. (A) Pictures represent the expression of NF-200, GAP-43 and MAP-2, respectively. Rats in each group were sacrificed at Day 14 after the MCAO. Scale bar = 50 um. (B) Immunofluorescence analysis of NF-200 (n = 3), ∗ p < 0.05, as compared with the AAV-empty group, # p < 0.05, as compared with the AAV-NT-1 group. (C) Immunofluorescence analysis of GAP-43 (n = 3), ∗ p < 0.01, as compared with the AAV-empty group, # p < 0.01, as compared with the AAV-NT-1 group. (D) Immunofluorescence analysis of MAP-2 (n = 3), ∗ p < 0.05, as compared with the AAV-empty group.Index in PubMed under a CC BY license. PMID: 29487502



Effects of Netrin-1 overexpression and/or JNK inhibition on the axonal regeneration after the MCAO. (A) The representative images of western-blot analysis for NF-200, GAP-43 and MAP-2. Rats in each group were sacrificed at Day 14 after the MCAO. (B) Western-blot analysis of NF-200 (n = 3), ∗ p < 0.01, as compared with the AAV-empty group, # p < 0.05, as compared with the AAV-empty group. (C) Western-blot analysis of GAP-43 (n = 3), ∗ p < 0.05, as compared with the AAV-empty group, # p < 0.01, as compared with the AAV-NT-1 group. (D) Western-blot analysis of MAP-2 (n = 3), ∗ p < 0.05, as compared with the AAV-empty group.Index in PubMed under a CC BY license. PMID: 29487502

17 Publications Citing This Product

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1. PubMed ID: 10.1186/s12974-016-0546-2, Downregulation of CD47 and CD200 in patients with focal cortical dysplasia type IIb and tuberous sclerosis complex

2. PubMed ID: 10.12659/MSM.900893, Changes in the Expression of miR-34a and its Target Genes Following Spinal Cord Injury In Rats

3. PubMed ID: 10.26355/eurrev_201712_14018, Apolipoprotein E 4 triggers multiple pathway-mediated Ca2+ overload, causes CaMK II phosphorylation abnormity and aggravates oxidative stress caused cerebral cortical neuron damage

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Anti-Nefh Antibody

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