

Anti-NSE/ENO2 Antibody Picoband®

Catalog Number: A02930

About ENO2

NSE (neuron specific enolase), also known as Enolase 2 (ENO2), is found in elevated concentrations in plasma in certain neoplasias. The enolases catalyze the interconversion of 2-phosphoglycerate to phosphoenolpyruvate in the glycolytic pathway. ENO2 gene contains 12 exons distributed over 9,213 nucleotides. Human neurone-specific enolase is mapped to chromosome 12p13.

Overview

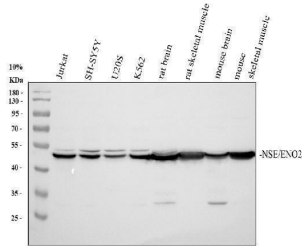
Product Name	Anti-NSE/ENO2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-NSE/ENO2 Antibody Picoband® catalog # A02930. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium 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	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	P09104

Technical Details

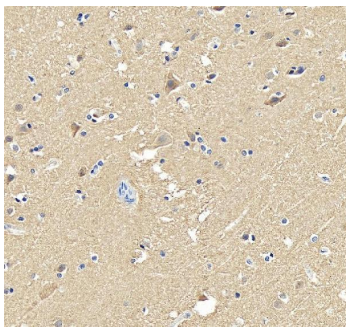
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human NSE, which shares 95.1% and 100% amino acid (aa) sequence identity with mouse and rat NSE, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
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, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 5ug/ml Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells

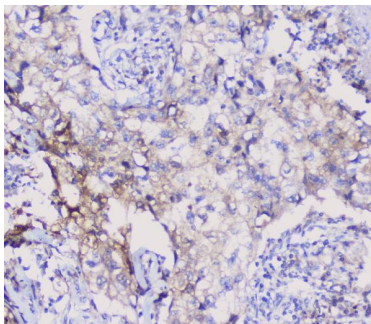
Anti-NSE/ENO2 Antibody Picoband® (A02930) Images



Western blot analysis of NSE/ENO2 using anti-NSE/ENO2 antibody (A02930). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Jurkat whole cell lysates, Lane 2: human SH-SY5Y whole cell lysates, Lane 3: human U2OS whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat skeletal muscle tissue lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse skeletal muscle tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-NSE/ENO2 antigen affinity purified polyclonal antibody (A02930) at 0.5 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for NSE/ENO2 at approximately 47 kDa. The expected band size for NSE/ENO2 is at 47 kDa.

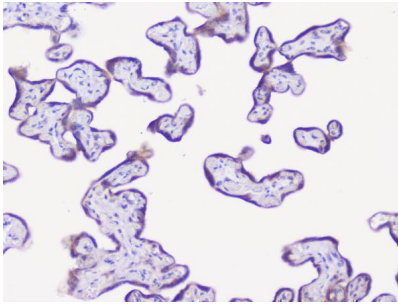


IHC analysis of NSE/ENO2 using anti-NSE/ENO2 antibody (A02930). NSE/ENO2 was detected in a paraffin-embedded section of human brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-NSE/ENO2 Antibody (A02930) overnight at 4°C. 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.

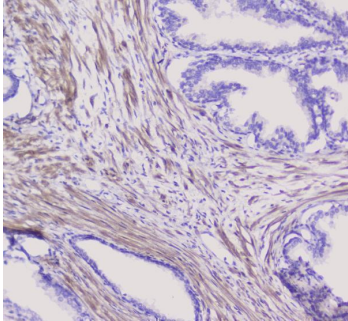


IHC analysis of NSE using anti-NSE antibody (A02930). NSE was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-NSE Antibody (A02930) 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 Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

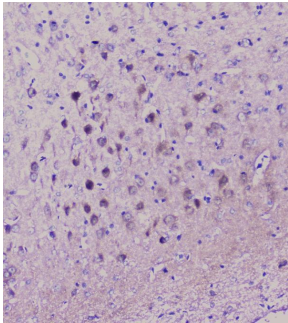
IHC analysis of NSE using anti-NSE antibody (A02930). NSE was detected in paraffin-embedded section of human



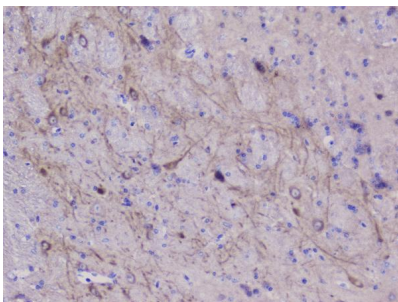
placenta tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-NSE Antibody (A02930) overnight at 4°C. Biotinylated goat anti-rabbit 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 NSE using anti-NSE antibody (A02930).NSE was detected in paraffin-embedded section of human pancreatic cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-NSE Antibody (A02930) 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.

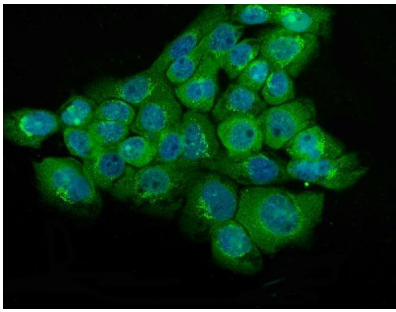


IHC analysis of NSE using anti-NSE antibody (A02930).NSE was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-NSE Antibody (A02930) 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.

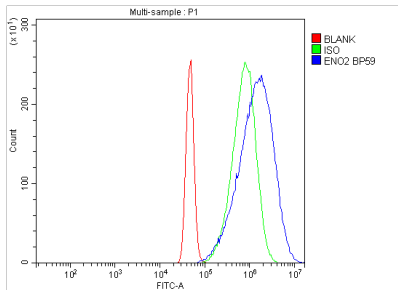


IHC analysis of NSE using anti-NSE antibody (A02930).NSE was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-NSE Antibody (A02930) 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.

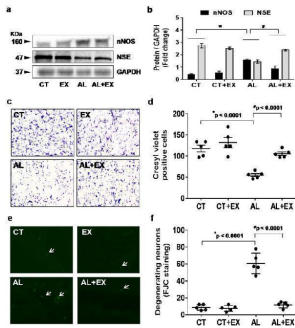
IF analysis of NSE using anti-NSE antibody (A02930). NSE was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-NSE Antibody (A02930) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and



incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of A431 cells using anti-NSE antibody (A02930). Overlay histogram showing A431 cells stained with A02930 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-NSE Antibody (A02930, 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.



Effect of exercise on alcohol induced neuronal damage. (a,b) Representative western blot analysis showing the levels of neuronal proteins (NeuN and NSC) in different mice groups (a). Histogram showing the quantitative estimation of nNOS and NSE proteins after normalization with GAPDH (b). (c,d) Representative images showing coronal slices of mice brains stained with cresyl violet (40× magnification) (c). Scatter dot plot showing the number of cresyl violet positive cells in different groups of mice (d). (e,f) Representative images showing Fluoro-Jade C (FJC) staining in brain sections of the different groups of mice (10× magnification). A marked decrease of FJC-stained degenerating neurons (arrows) were observed in CT, EX and AL+EX groups, indicating a lesser degree of neuronal cell death. Brain sections of AL treated mice showing a greater number of FJC-positive neurons (arrows), reflecting increased neuronal cell death (e). Scatter dot plot showing the numbers of degenerating neurons in different experimental mice groups (f). All the data are represented as mean values ± standard error (SE) in 5 independent experiments. * ,# p<0.05 considered significant. *p<0.05 vs. CT and # p<0.05 vs. AL group. Uncropped blots for a are presented in Supplementary Fig. . Index in PubMed under a CC BY license. PMID: 29581524

33 Publications Citing This Product

1. PubMed ID: 10.5114/fn.2018.76615, The impact of bone marrow-derived mesenchymal stem cells on neovascularisation in rats with brain injury.
2. PubMed ID: PMID:25197353, Effects of transforming growth factor-beta2 on myocilin expression and secretion in human primary cultured trabecular meshwork cells
3. PubMed ID: 10.3109/10717544.2011.596583, Brain targeting and toxicity study of odorranalectin-conjugated nanoparticles following

intranasal administration

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