

Anti-nNOS (neuronal)/NOS1 Antibody Picoband®

Catalog Number: A01070-2

About NOS1

Nitric oxide synthase 1 (neuronal), also known as NOS1, is an enzyme that in humans is encoded by the NOS1 gene. The protein encoded by this gene belongs to the family of nitric oxide synthases, which synthesize nitric oxide from L-arginine. Nitric oxide is a reactive free radical, which acts as a biologic mediator in several processes, including neurotransmission, and antimicrobial and antitumoral activities. In the brain and peripheral nervous system, nitric oxide displays many properties of a neurotransmitter, and has been implicated in neurotoxicity associated with stroke and neurodegenerative diseases, neural regulation of smooth muscle, including peristalsis, and penile erection. This protein is ubiquitously expressed, with high level of expression in skeletal muscle. Multiple transcript variants that differ in the 5' UTR have been described for this gene but the full-length nature of these transcripts is not known. Additionally, alternatively spliced transcript variants encoding different isoforms (some testis-specific) have been found for this gene.

Overview

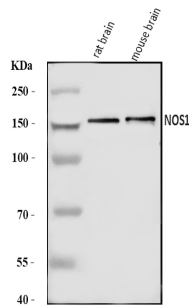
Product Name	Anti-nNOS (neuronal)/NOS1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-nNOS (neuronal)/NOS1 Antibody Picoband® catalog # A01070-2. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates 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, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	P29475

Technical Details

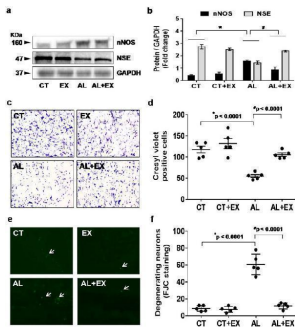
Immunogen	E.coli-derived human nNOS (neuronal)/NOS1 recombinant protein (Position: R19-E1320).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

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, 0.25-0.5 ug/ml, Mouse, Rat Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

Anti-nNOS (neuronal)/NOS1 Antibody Picoband® (A01070-2) Images

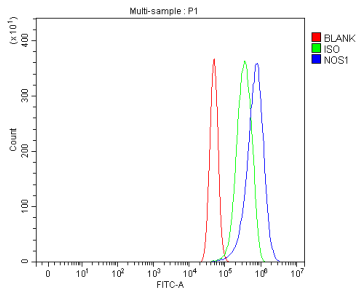


Western blot analysis of nNOS (neuronal)/NOS1 using anti-nNOS (neuronal)/NOS1 antibody (A01070-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 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-nNOS (neuronal)/NOS1 antigen affinity purified polyclonal antibody (Catalog # A01070-2) 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 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 nNOS (neuronal)/NOS1 at approximately 161 kDa. The expected band size for nNOS (neuronal)/NOS1 is at 161 kDa.



Effect of exercise on alcohol induced neuronal damage. (a,b) Representative western blot analysis showing the levels of neuronal proteins (NeuN and NSE) 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

Flow Cytometry analysis of U87 cells using anti-nNOS (neuronal)/NOS1 antibody (A01070-2). Overlay histogram showing U87 cells stained with A01070-2 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-nNOS (neuronal)/NOS1 Antibody (A01070-2, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as



secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

2 Publications Citing This Product

1. PubMed ID: 10.1089/adt.2018.912, Protective and Modulatory Effects of *Trapa bispinosa* and *Trigonella foenum-graecum* on Neuroblastoma Cells Through Neuronal Nitric Oxide Synthase
2. PubMed ID: 10.1007/s11596-018-1904-3, Effects of Repetitive Transcranial Magnetic Stimulation on Astrocytes Proliferation and nNOS Expression in Neuropathic Pain Rats

Visit bosterbio.com/anti-nnos-neuronal-nos1-picoband-trade-antibody-a01070-2-boster.html to see all 2 publications.

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Anti-nNOS (neuronal)/NOS1 Antibody

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