

## Anti-iNOS/NOS2 Antibody Picoband®

Catalog Number: A00368

### About NOS2

Nitric oxide synthase, inducible is an enzyme that in humans is encoded by the NOS2 gene. Nitric oxide (NO) is a messenger molecule with diverse functions throughout the body. In the brain and peripheral nervous system, NO displays many properties of a neurotransmitter; it is implicated in neurotoxicity associated with stroke and neurodegenerative diseases, neural regulation of smooth muscle, including peristalsis, and penile erection. Three different NOS isoforms have been identified which fall into two distinct types, constitutive and inducible. The inducible NOS (iNOS) isoform is expressed in a variety of cell types and tissues in response to inflammatory agents and cytokines. The human iNOS (NOS2) gene is approximately 37 kb in length and consists of 26 exons and 25 introns. NOS2-derived NO is a prerequisite for cytokine signaling and function in innate immunity.

### Overview

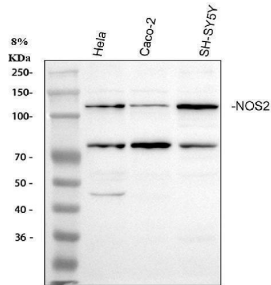
Product Name	Anti-iNOS/NOS2 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-iNOS/NOS2 Antibody Picoband® catalog # A00368. Tested in IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
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	P35228

### Technical Details

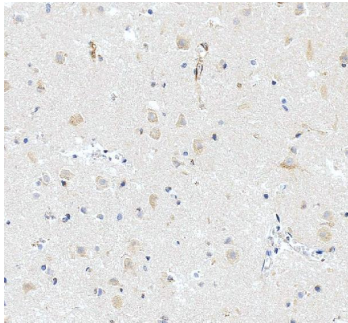
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human iNOS, different from the related mouse sequence by five amino acids, and from the related rat sequence by four amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit 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, 0.1-0.5ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human

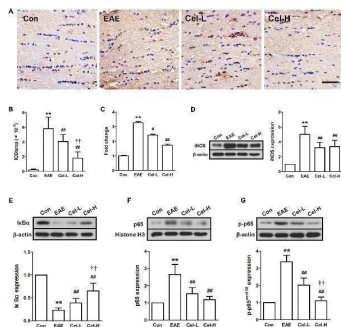
## Anti-iNOS/NOS2 Antibody Picoband® (A00368) Images



Western blot analysis of NOS2 using anti-NOS2 antibody (A00368). 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: human HeLa whole cell lysates, Lane 2: human Caco-2 whole cell lysates, Lane 3: human SH-SY5Y whole cell 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-NOS2 antigen affinity purified polyclonal antibody (Catalog # A00368) 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 NOS2 at approximately 131 kDa. The expected band size for NOS2 is at 131 kDa.



IHC analysis of iNOS/NOS2 using anti-iNOS/NOS2 antibody (A00368). iNOS/NOS2 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-iNOS/NOS2 Antibody (A00368) 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.



Celastrol inhibited inducible nitric oxide synthase (iNOS) expression and activation of NF-kappaB in optic nerve in EAE rats. (A) IHC staining of iNOS in optic nerve. (B) Quantification of iNOS-positive areas. (C) Quantitative real-time PCR analysis of iNOS expression. (D) Western blot analysis of iNOS expression. (E-G) Western blot analysis of I kappa B alpha, p65 and p-p65 expression, respectively. Treatment of celastrol reduced expression of iNOS and inhibited the activation of NF-kappaB in optic nerve in EAE rats. Scale bar: 100 um. Data were shown as mean  $\pm$  SD, n = 5. \*\* P < 0.01 versus control group, ## P < 0.01 versus EAE group, †† P < 0.01 versus low dosage of celastrol group. Index in PubMed under a CC BY license. PMID: 28239352

## 34 Publications Citing This Product

#### Encephalomyelitis Model

2. PubMed ID: 10.3109/13880209.2014.898075, Effect of ammonium pyrrolidine dithiocarbamate (PDTC) on NF-kappaB activation and CYP2E1 content of rats with immunological liver injury

3. PubMed ID: 10.3892/mmr.2014.2859, HIF $\alpha$ 1 signaling pathway involving iNOS, COX $\alpha$ 2 and caspase $\alpha$ 9 mediates the neuroprotection provided by erythropoietin in the retina of chronic ocular hypertension rats

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#### Anti-iNOS/NOS2 Antibody

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