BOSTER BIOLOGICAL TECHNOLOGY
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Anti-NADPH oxidase 1 NOX1 Antibody Picoband®

Catalog Number: PA1666

About Nox1

NOX1 (NADPH OXIDASE 1), also known as NOH1, MOX1 or GP91-2, is an enzyme that in humans is encoded by the NOX1 gene. It is also a homolog of the catalytic subunit of the superoxide-generating NADPH oxidase of phagocytes, gp91phox. The NOX1 gene is mapped to Xq22.1. NOX1 was expressed in colon, prostate, uterus, and vascular smooth muscle, but not in peripheral blood leukocytes. The deduced 564-amino acid NOX1 protein, which is 58% identical to CYBB, contains 6 membrane-spanning regions, conserved flavin and pyridine nucleotide-binding sites, and histidines possibly involved in heme ligation. Overexpression of MOX1 in NIH 3T3 cells increased superoxide generation and cell growth. Cells expressing MOX1 had a transformed appearance, showed anchorage-independent growth, and produced tumors in athymic mice. Disruption of either Nox1 or Nox2 significantly delayed progression of motor neuron disease in these mice. However, 50% survival rates were enhanced significantly more by Nox2 deletion than Nox1 deletion.

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Overview

Product Name	Anti-NADPH oxidase 1 NOX1 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-NADPH oxidase 1 NOX1 Antibody catalog # PA1666. Tested in IHC, WB applications. This antibody reacts with 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg 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	Q9WV87

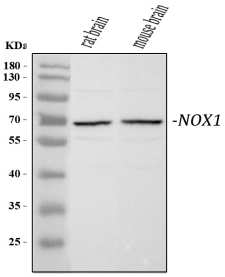
Technical Details

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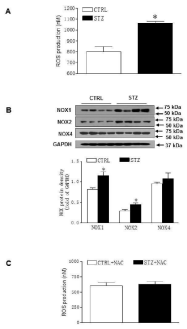
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of rat NOX1, different from the related mouse sequence by one amino acid.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
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, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Rat

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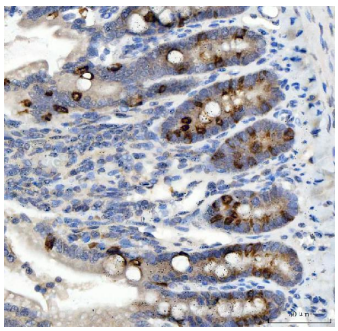
Anti-NADPH oxidase 1 NOX1 Antibody Picoband® (PA1666) Images



Western blot analysis of NOX1 using anti-NOX1 antibody (PA1666). 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-NOX1 antigen affinity purified polyclonal antibody (Catalog # PA1666) 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 NOX1 at approximately 65 kDa. The expected band size for NOX1 is at 65 kDa.



Effect of GDM on the ROS level in offspring. Heart tissues were isolated from male offspring. (A) ROS levels in the left ventricle (LV) tissues isolated from both control (□) and STZ-treated (■) groups were measured using in vitro ROS/RNS assay kit. (B) NOX1, 2, and 4 protein abundances in the LV tissues isolated from both control (□) and STZ-treated (■) groups were determined by Western blot analysis. Their protein densities were normalized to internal control (GAPDH). (C) After NAC pretreatment, ROS levels in the LV tissues isolated from both control (□) and STZ-treated (■) groups were measured using in vitro ROS/RNS assay kit. Data are means ± SEM (n=4 animals/group). *P < 0.05 vs. control, as determined by Student's t-test.Index in PubMed under a CC BY license. PMID: 31223283



IHC analysis of NOX1 using anti-NOX1 antibody (PA1666). NOX1 was detected in a paraffin-embedded section of rat colon 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-NOX1 Antibody (PA1666) 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.

3 Publications Citing This Product

1. PubMed ID: 25857968, Wang Y, Wang Y, Liu D, Wang W, Zhao H, Wang M, Yin H. Carbohydr Polym. 2015 Jul 10;125:135-45. Doi: 10.1016/J.Carbpol.2015.02.012. Epub 2015 Feb 19. Cordyceps Sinensis Polysaccharide Inhibits Pdgf-Bb-Induced Inflammation And Ros

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2. PubMed ID: 23668792, Gu Y, Gong Y, Zhang H, Dong X, Zhao T, Burczynski Fj, Wang G, Sun S, Zhu B, Han W, Wang H, Li P. Biochem Cell Biol. 2013 Jun;91(3):187-93. Doi: 10.1139/Bcb-2012-0087. Epub 2012 Dec 13. Regulation Of Transforming Growth Factor Beta 1 Gene Expressio...

3. PubMed ID: 29963902, Deficiency of NOX1 or NOX4 Prevents Liver Inflammation and Fibrosis in Mice through Inhibition of Hepatic Stellate Cell Activation

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Anti-NADPH oxidase 1 NOX1 Antibody

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