BOSTER BIOLOGICAL TECHNOLOGY
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Anti-NADPH oxidase 4/NOX4 Antibody Picoband®

Catalog Number: A00403

About NOX4

NADPH oxidase 4 is an enzyme that in humans is encoded by the NOX4 gene, and is a member of the NOX family of NADPH oxidases. This gene encodes a member of the NOX-family of enzymes that functions as the catalytic subunit the NADPH oxidase complex. The encoded protein is localized to non-phagocytic cells where it acts as an oxygen sensor and catalyzes the reduction of molecular oxygen to various reactive oxygen species (ROS). The ROS generated by this protein have been implicated in numerous biological functions including signal transduction, cell differentiation and tumor cell growth. A pseudogene has been identified on the other arm of chromosome 11. Alternative splicing results in multiple transcript variants.

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Overview

Product Name	Anti-NADPH oxidase 4/NOX4 Antibody Picoband®
Reactive Species	Human, Monkey
Description	Boster Bio Anti-NADPH oxidase 4/NOX4 Antibody Picoband® catalog # A00403. Tested in IF, ICC, WB applications. This antibody reacts with Human, Monkey. 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	IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	Q9NPH5

Technical Details

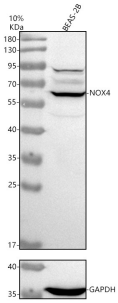
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human NADPH oxidase 4, which shares 97.2% amino acid (aa) sequence identity with both mouse and rat NADPH oxidase 4.

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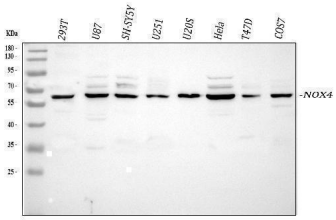
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	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 Immunocytochemistry/Immunofluorescence, 5ug/ml

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Anti-NADPH oxidase 4/NOX4 Antibody Picoband® (A00403) Images



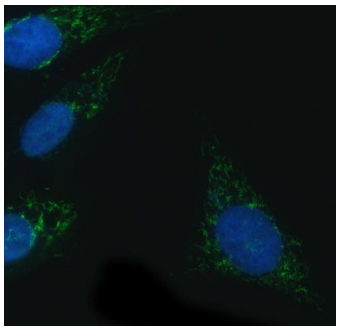
Western blot analysis of NOX4 using anti-NOX4 antibody (A00403). Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human BEAS-2B whole cell lysates. 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-NOX4 antigen polyclonal antibody (A00403) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween-20 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 NOX4 at approximately 67 kDa. The expected band size for NOX4 is at 67 kDa.



Western blot analysis of NOX4 using anti-NOX4 antibody (A00403). 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 293T whole cell lysates, Lane 2: human U87 whole cell lysates, Lane 3: human SH-SY5Y whole cell lysates, Lane 4: human U251 whole cell lysates, Lane 5: human U2OS whole cell lysates, Lane 6: human Hela whole cell lysates, Lane 7: human T47D whole cell lysates, Lane 8: monkey COS-7 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-NOX4 antigen affinity purified polyclonal antibody (Catalog # A00403) 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 NOX4 at approximately 65 kDa. The expected band size for NOX4 is at 67 kDa.

IF analysis of NOX4 using anti-NOX4 antibody (A00403). NOX4 was detected in an immunocytochemical section of U2OS 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 5 ug/mL rabbit anti-NOX4 Antibody (A00403) overnight at 4°C. DyLight488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section

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was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

6 Publications Citing This Product

1. PubMed ID: 10.1016/j.abb.2017.06.017, Polydatin protects against carbon tetrachloride-induced liver fibrosis in mice

2. PubMed ID: 10.1016/j.ijbiomac.2016.05.002, Bletilla striata polysaccharide inhibits angiotensin II-induced ROS and inflammation via NOX4 and TLR2 pathways

3. PubMed ID: 10.1097/FJC.0000000000000534, Suppression of Oxidative Stress and Apoptosis in Electrically Stimulated Neonatal Rat Cardiomyocytes by Resveratrol and Underlying Mechanisms

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