

Rabbit NADPH oxidase 4 Polyclonal Antibody | anti-NOX4 antibody

Anti-NADPH oxidase 4 Picoband antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA124570	Rabbit	Human, Mouse, Rat No cross reactivity with other proteins.	Western Blot, Immunohistochemistry

PRODUCT SYNONYMS

NADPH oxidase 4; Polyclonal Antibody; Anti-NADPH oxidase 4 Picoband antibody; Kidney oxidase-1; KOX-1; Kidney superoxide-producing NADPH oxidase; Renal NAD(P)H-oxidase; NOX4; RENOX; anti-NOX4 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat No cross reactivity with other proteins.
Clonality	Polyclonal
Form/Format	Lyophilized
Sequence Length	514
Applicable Applications for anti-NOX4 antibody	WB (Western Blot), IHC (Immunohistochemistry)
Immunogen	A synthetic peptide corresponding to a sequence of human NADPH oxidase 4 (ILNTLLDDWKPYKLRRLYFIWVCRDIQSFRWFADLL).
Subcellular Localization	Endoplasmic reticulum membrane; May localize to plasma membrane and focal adhesions. According to PubMed: 15927447, may also localize to the nucleus.
Tissue Specificity	Expressed by distal tubular cells in kidney cortex and in endothelial cells (at protein level). Widely expressed. Strongly expressed in kidney and to a lower extent in heart, adipocytes, hepatoma, endothelial cells, skeletal muscle, brain, several brain tumor cell lines and airway epithelial cells.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



IHC (Immunohistochemisry)

Figure 3. IHC analysis of NADPH oxidase 4 using anti-NADPH oxidase 4 antibody (AAA124570).NADPH oxidase 4 was detected in paraffin-embedded section of human renal 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-NADPH oxidase 4 Antibody (AAA124570) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 2. Western blot analysis of NADPH oxidase 4 using anti-NADPH oxidase 4 antibody (AAA124570).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 50ug of sample under reducing conditions.Lane 1: rat kidney tissue lysates,Lane 2: rat NRK whole cell lysates,Lane 3: mouse kidney tissue lysates,Lane 4: mouse HEPA1-6 whole cell lysates,Lane 5: mouse SP20 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-NADPH oxidase 4 antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree 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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for NADPH oxidase 4 at approximately 85KD. The expected band size for NADPH oxidase 4 is at 67KD.



WB (Western Blot)

Figure 1. Western blot analysis of NADPH oxidase 4 using anti-NADPH oxidase 4 antibody (AAA124570).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 50ug of sample under reducing conditions.Lane 1: human Hela whole cell lysates,Lane 2: human MCF-7 whole cell lysates,Lane 3: human HepG2 whole cell lysates,Lane 4: human A549 whole cell lysates,Lane 5: human 293T whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-NADPH oxidase 4 antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree 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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for NADPH oxidase 4 at approximately 85KD. The expected band size for NADPH oxidase 4 is at 67KD.

ADDITIONAL INFORMATION

Related Product Information for anti-NOX4 antibody	Description: 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. Protein Function: Constitutive NADPH oxidase which generates superoxide intracellularly upon formation of a complex with CYBA/p22phox. Regulates signaling cascades probably through phosphatases inhibition. May function as an oxygen sensor regulating the KCNK3/TASK-1 potassium channel and HIF1A activity. May regulate insulin signaling cascade. May play a role in apoptosis, bone resorption and lipolysaccharide-mediated activation of NFkB. May produce superoxide in the nucleus and play a role in regulating gene expression upon cell stimulation. Isoform 3 is not functional. Isoform 5 and isoform 6 display reduced activity.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	219842346
NCBI GeneID	50507
NCBI Accession #	NP_001137308.1

NCBI GenBank Nucleotide #	NM_001143836.2
UniProt Accession #	Q9NPH5; Q5K3R4; Q5K3R5; Q5K3R6; Q5K3R8; Q7Z7G3; Q86V92; A8K715; B7Z520; E7EMD7
Molecular Weight	59,915 Da
NCBI Official Full Name	NADPH oxidase 4 isoform b
NCBI Official Synonym Full Names	NADPH oxidase 4
NCBI Official Symbol	NOX4
NCBI Official Synonym Symbols	KOX; KOX-1; RENOX
NCBI Protein Information	NADPH oxidase 4
UniProt Protein Name	NADPH oxidase 4
UniProt Gene Name	NOX4
UniProt Synonym Gene Names	RENOX; KOX-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/nadph-oxidase-4-antibody-western-blot-immunohistochemistry-elisa/124570>