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Anti-NADPH Oxidase 4 Antibody
Catalog # ABO11232

Specification

Anti-NADPH Oxidase 4 Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	Q9JHI8
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for NADPH oxidase 4(NOX4) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-NADPH Oxidase 4 Antibody - Additional Information

Gene ID 50490

Other Names
NADPH oxidase 4, 1.6.3.-, Kidney oxidase-1, KOX-1, Kidney superoxide-producing NADPH oxidase, Renal NAD(P)H-oxidase, Superoxide-generating NADPH oxidase 4, Nox4, Renox

Calculated MW
66519 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Rat, Human, Mouse, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization
Endoplasmic reticulum membrane ; Multi-pass membrane protein . Cell junction, focal adhesion . Cell membrane . May localize to plasma membrane and focal adhesions. .

Tissue Specificity
EXpressed in brain, in all layers of the cerebellum, in pyramidal cells of the Ammon horn and in Purkinje cells (at protein level). Expressed in osteoclasts, leukocytes, kidney, liver and lung. .

Protein Name
NADPH oxidase 4

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of mouse NADPH oxidase

4(561-578aa NRNNSYGTKFEYNKES), identical to the related rat sequence and different from the related human sequence by two amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Contains 1 FAD-binding FR-type domain.

Anti-NADPH Oxidase 4 Antibody - Protein Information

Name Nox4

Synonyms Renox

Function
NADPH oxidase that catalyzes predominantly the reduction of oxygen to H2O2 (By similarity). Can also catalyze to a smaller extent, the reduction of oxygen to superoxide (PubMed:10869423, PubMed:11098048, PubMed:15638999). May function as an oxygen sensor regulating the KCNK3/TASK-1 potassium channel and HIF1A activity (By similarity). May regulate insulin signaling cascade (By similarity). May play a role in apoptosis, bone resorption and lipolysaccharide- mediated activation of NFKB (By similarity). May produce superoxide in the nucleus and play a role in regulating gene expression upon cell stimulation (By similarity). Promotes ferroptosis, reactive oxygen species production and reduced glutathione (GSH) levels by activating NLRP3 inflammasome activation and cytokine release (By similarity).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:Q9NPH5}. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9NPH5}; Multi- pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:Q9NPH5}; Multi-pass membrane protein. Cell junction, focal adhesion {ECO:0000250|UniProtKB:Q924V1}. Nucleus {ECO:0000250|UniProtKB:Q9NPH5}

Tissue Location
EXpressed in brain, in all layers of the cerebellum, in pyramidal cells of the Ammon horn and in Purkinje cells (at protein level). Expressed in osteoclasts, leukocytes, kidney, liver and lung.

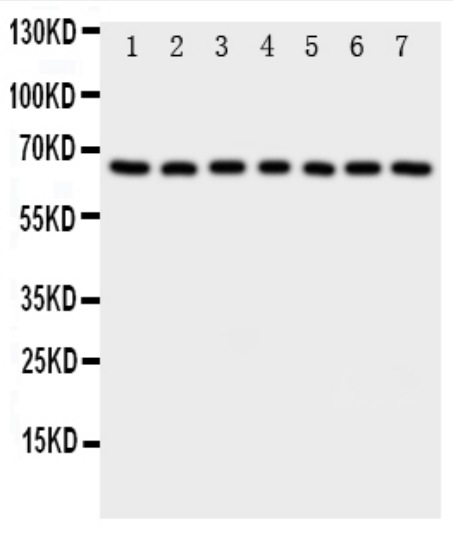
Anti-NADPH Oxidase 4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

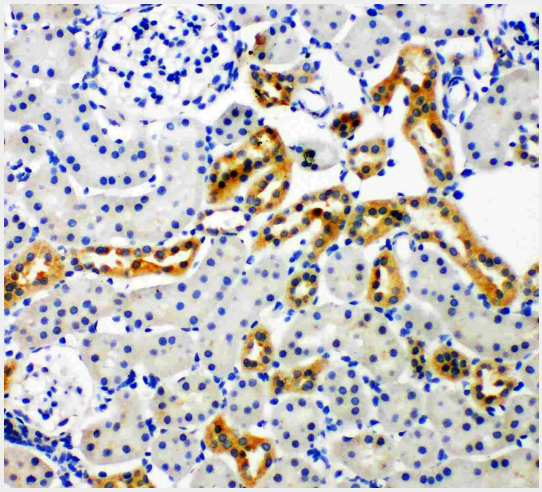
- Western Blot
- Blocking Peptides
- Dot Blot

- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-NADPH Oxidase 4 Antibody - Images



Anti-NADPH oxidase 4 antibody, ABO11232, Western blottingLane 1: Rat Kidney Tissue LysateLane 2: Rat Cardiac Muscle Tissue LysateLane 3: Rat Spleen Tissue LysateLane 4: HELA Cell LysateLane 5: 293T Cell LysateLane 6: MCF-7 Cell LysateLane 7: SMMC Cell Lysate



Anti-NADPH oxidase 4 antibody, ABO11232, IHC(P)IHC(P): Rat Kidney Tissue

Anti-NADPH Oxidase 4 Antibody - Background

NOX4(NADPH oxidase 4), also called RENAL NADPH OXIDASE or RENOX, is an enzyme that in humans is encoded by the NOX4 gene, and a member of the NOX family of NADPH oxidases. Geiszt et al.(2000) stated that the nucleotide sequence of RENOX matches that found in a genomic clone on chromosome 15. In a note added in proof, they stated that genomic clones assigned to chromosome 11 also contain sequence corresponding to RENOX. By FISH, Shiose et al.(2001) mapped the NOX4 gene to chromosome 11q14.2-q21. Geiszt et al.(2000) found that NIH 3T3 fibroblasts overexpressing transfected RENOX showed increased production of superoxide and

developed signs of cellular senescence. They suggested that RENOX, as a renal source of ROS, may fulfill the function of the putative oxygen sensor in the kidney. By biochemical analysis of endogenous renal NOX4, Shiose et al.(2001) determined that the enzyme can use either NADH or NADPH as an electron donor for superoxide production.