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Rabbit Anti-NADPH oxidase 4 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52323

Specification

Rabbit Anti-NADPH oxidase 4 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q9JHI8
Reactivity	**Human, Mouse, Rat, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**64 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human Nox-4**
Epitope Specificity	**81-180/578**
Isotype	**IgG**
Purity	
affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell junction, focal adhesion. Cell membrane. Note=May localize to plasma membrane and focal adhesions.**
SIMILARITY	**Contains 1 FAD-binding FR-type domain.Contains 1 ferric oxidoreductase domain.**
SUBUNIT	**Interacts with, relocalizes and stabilizes CYBA/p22phox. Interacts with TLR4. Interacts with protein disulfide isomerase.**
Post-translational modifications	**N-glycosylation is required for the function (By similarity).**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
Nox4 is a renal gp91-phox homolog highly expressed at the site of erythropoietin production in the proximal convoluted tubule epithelial cells of the renal cortex. Nox4 is also expressed in fetal tissues, placenta, glioblastoma and vascular cells. Like gp91-phox, the enzymatic activity of Nox4 produces superoxide anions. In vascular cells, the addition of angiotensin II increases Nox4 expression, which suggests a role for Nox-4 in vascular oxidative stress response.

Rabbit Anti-NADPH oxidase 4 Polyclonal Antibody - Additional Information

Gene ID 50490

Other Names
AI64821; NADPH oxidase 4; Kidney oxidase-1; KOX-1; Kidney superoxide-producing NADPH oxidase; Renal NAD(P)H-oxidase; Superoxide-generating NADPH oxidase 4; Nox4; Renox

Target/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.

Dilution
WB~~1:100~1:500<br \>IHC-P~~1:100~1:500<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

Rabbit Anti-NADPH oxidase 4 Polyclonal 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.

Rabbit Anti-NADPH oxidase 4 Polyclonal Antibody - Protocols

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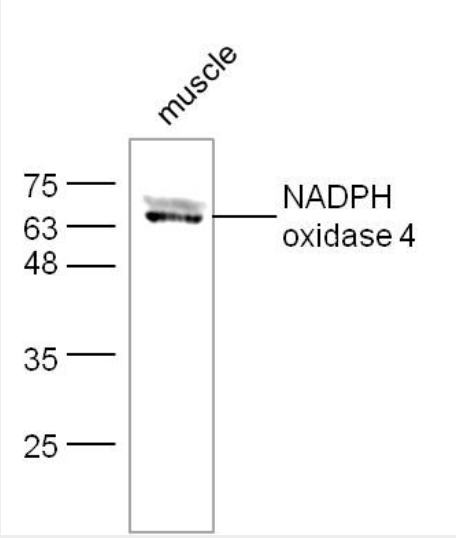
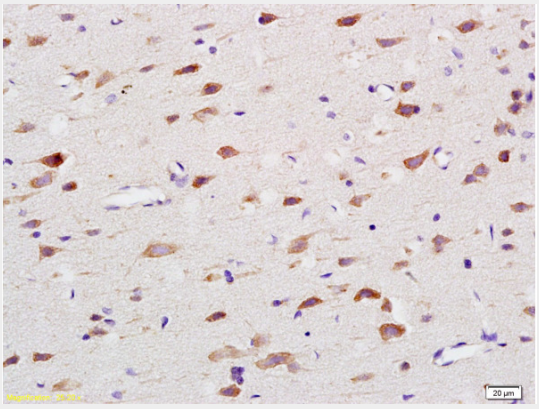
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Rabbit Anti-NADPH oxidase 4 Polyclonal Antibody - Images



Mouse muscle lysates probed with Rabbit Anti-NADPH oxidase 4 Polyclonal Antibody, Unconjugated (AP52323) at 1:300 overnight at 4˚C. Followed by conjugation to secondary antibody at 1:500 for 90 min at 37˚C.



Formalin-fixed and paraffin embedded rat brain labeled with Anti-Nox4/NADH Polyclonal Antibody, Unconjugated (AP52323) at 1:200 followed by conjugation to the secondary antibody and DAB staining.

Rabbit Anti-NADPH oxidase 4 Polyclonal Antibody - Background

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.