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NOX4 Antibody

Rabbit mAb
Catalog # AP90299

Product Information

Application	WB, IHC, IF, ICC, IP, IHF
Primary Accession	Q9NPH5
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	NADPH oxidase 4; Kidney oxidase-1; KOX-1; KOX1; Kidney superoxide-producing NADPH oxidase; Renal NAD(P)H-oxidase; NOX4; RENOX;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	66932

Additional Information

Dilution	WB 1:1000~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human NOX4
Description	The superoxide-generating NADPH oxidase includes a membrane-bound flavocytochrome containing two subunits, gp91-phox and p22-phox, and the cytosolic proteins p47-phox and p67-phox. During activation of the NADPH oxidase, p47-phox and p67-phox migrate to the plasma membrane where they associate with the flavocytochrome, cytochrome b558, to form the active enzyme complex.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	NOX4
Synonyms	RENOX
Function	NADPH oxidase that catalyzes predominantly the reduction of oxygen to H2O2 (PubMed:14966267, PubMed:15356101, PubMed:15927447, PubMed:21343298, PubMed:25062272). Can also catalyze to a smaller extent, the reduction of oxygen to superoxide (PubMed:10869423, PubMed:11032835, PubMed:15155719, PubMed:15572675, PubMed:15927447, PubMed:16019190, PubMed:16179589, PubMed:16230378, PubMed:16324151, PubMed:25062272). May function as an oxygen sensor regulating the KCNK3/TASK-1 potassium channel and HIF1A activity (PubMed:16019190). May regulate insulin signaling cascade

(PubMed:14966267). May play a role in apoptosis, bone resorption and lipolysaccharide-mediated activation of NFKB (PubMed:15356101, PubMed:15572675). May produce superoxide in the nucleus and play a role in regulating gene expression upon cell stimulation (PubMed:16324151). Promotes ferroptosis, reactive oxygen species production and reduced glutathione (GSH) levels by activating NLRP3 inflammasome activation and cytokine release (PubMed:39909992).

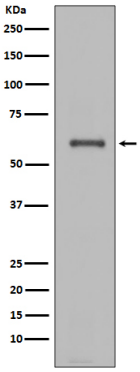
Cellular Location

Cytoplasm. Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cell junction, focal adhesion {ECO:0000250|UniProtKB:Q924V1}. Nucleus [Isoform 3]: Cytoplasm. Cytoplasm, perinuclear region [Isoform 6]: Cytoplasm. Cytoplasm, perinuclear region

Tissue Location

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

Images



Western blot analysis of NOX4 expression in JAR cell lysate.

Image not found : 202311/AP90299-IHC.jpg

Immunohistochemical analysis of paraffin-embedded rat kidney, using NOX4 Antibody .

Image not found : 202311/AP90299-IF.jpg

Immunofluorescent analysis of HeLa cells, using NOX4 Antibody .

Image not found : 202311/AP90299-IHC2.jpg

Improvement of vascular dysfunction by argirein through inhibiting endothelial cell apoptosis associated with ET-1/Nox4 signal pathway in diabetic rats. -Scientific Reports

Image not found : 202311/AP90299-wb6.jpg

Improvement of vascular dysfunction by argirein through inhibiting endothelial cell apoptosis associated with ET-1/Nox4 signal pathway in diabetic rats. -Scientific Reports