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NOX4 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP14025a

Specification

NOX4 Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q9NPH5

NOX4 Antibody (N-term) Blocking peptide - Additional Information

Gene ID 50507

Other Names
NADPH oxidase 4, 163-, Kidney oxidase-1, KOX-1, Kidney superoxide-producing NADPH oxidase, Renal NAD(P)H-oxidase, NOX4, RENOX

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP14025a was selected from the N-term region of NOX4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NOX4 Antibody (N-term) Blocking peptide - Protein Information

Name NOX4

Synonyms RENOX

Function
NADPH oxidase that catalyzes predominantly the reduction of oxygen to H2O2 (PubMed:15356101, PubMed:14966267, PubMed:15927447, PubMed:25062272, PubMed:21343298). Can also catalyze to a smaller extent, the reduction of oxygen to superoxide (PubMed:10869423, PubMed:11032835, PubMed:15155719, PubMed:<a

href="http://www.uniprot.org/citations/15572675" target="_blank">15572675, PubMed:16230378, PubMed:16179589, PubMed:16324151, PubMed:15927447, PubMed:16019190, 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:15572675, PubMed:15356101). May produce superoxide in the nucleus and play a role in regulating gene expression upon cell stimulation (PubMed:16324151).

Cellular Location
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

NOX4 Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

NOX4 Antibody (N-term) Blocking peptide - Images

NOX4 Antibody (N-term) Blocking peptide - Background

This gene encodes a member of the NOX-family of enzymesthat functions as the catalytic subunit the NADPH oxidase complex.The encoded protein is localized to non-phagocytic cells where itacts as an oxygen sensor and catalyzes the reduction of molecularoxygen to various reactive oxygen species (ROS). The ROS generatedby this protein have been implicated in numerous biologicalfunctions including signal transduction, cell differentiation andtumor cell growth. A pseudogene has been identified on the otherarm of chromosome 11. Alternative splicing results in multipletranscript variants.

NOX4 Antibody (N-term) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Salmeen, A., et al. Oncogene 29(31):4473-4484(2010)Wu, R.F., et al. Mol. Cell. Biol. 30(14):3553-3568(2010)Diebold, I., et al. Mol. Biol. Cell 21(12):2087-2096(2010)Manea, A., et al. Biochem. Biophys. Res. Commun. 396(4):901-907(2010)