

NOX4 Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14025A

Specification

NOX4 Antibody (N-term) - Product Information

Application	IHC-P, WB,E
Primary Accession	Q9NPH5
Other Accession	NP_001137308.1 , NP_058627.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	124-153

NOX4 Antibody (N-term) - 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

This NOX4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 124-153 amino acids from the N-terminal region of human NOX4.

Dilution

IHC-P~~1:10~50

WB~~1:2000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

NOX4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

NOX4 Antibody (N-term) - 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 lipopolysaccharide-mediated activation of NFκB (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

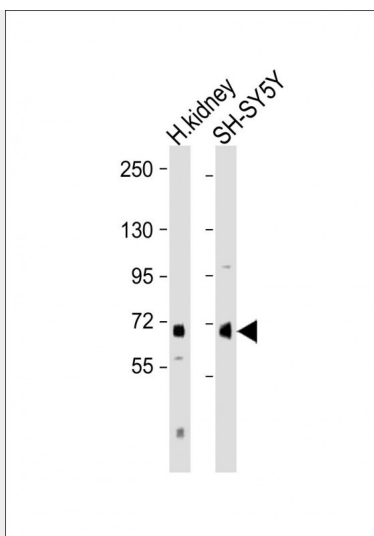
NOX4 Antibody (N-term) - Protocols

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

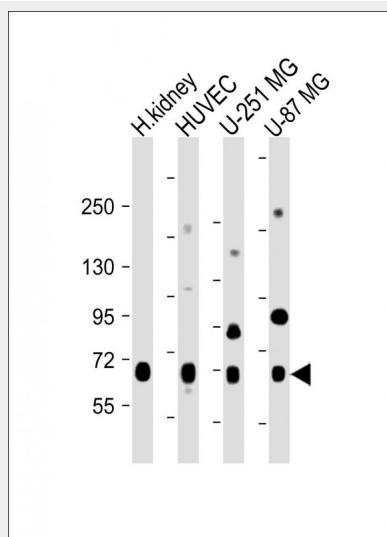
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

NOX4 Antibody (N-term) - Images

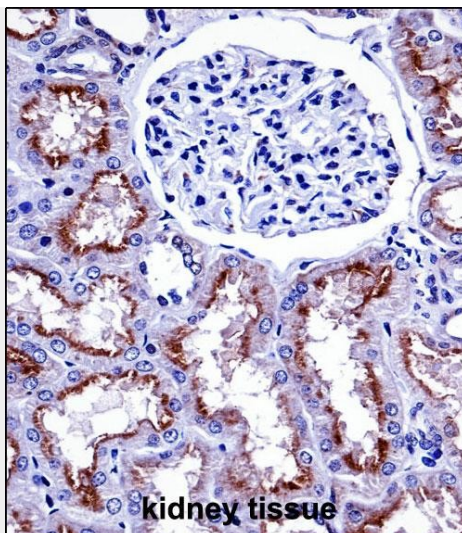




All lanes : Anti-NOX4 Antibody (N-term) at 1:2000 dilution Lane 1: Human kidney lysate Lane 2: SH-SY5Y whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 67 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-NOX4 Antibody (N-term) at 1:2000 dilution Lane 1: Human kidney lysate Lane 2: HUVEC whole cell lysate Lane 3: U-251 MG whole cell lysate Lane 4: U-87 MG whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 67 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



NOX4 Antibody (N-term) (AP14025a) immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of NOX4 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

NOX4 Antibody (N-term) - Background

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.

NOX4 Antibody (N-term) - 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)