



NOX4 (NADPH Oxidase 4, NOX-4, Renal NAD(P)H-Oxidase, RENOX, Kidney Superoxide-producing NADPH oxidase, KOX-1) (HRP)

Catalog number

N5376-77C

Supplier

United States Biological

Oxygen sensing is essential for homeostasis in all aerobic organisms. A phagocyte-type oxidase, similar to that responsible for the production of large amounts of reactive oxygen species (ROS) in neutrophil granulocytes, with resultant antimicrobial activity, has been postulated to function in the kidney as an oxygen sensor that regulates the synthesis of erythropoietin in the renal cortex. NOX4 has a role as a redox messenger in the activation of intracellular signaling pathways leading (or contributing) to mitochondriogenesis, cell survival, and differentiation in hematopoietic stem cells. Data suggest that NOX4 provides a novel link between the insulin receptor and the generation of cellular reactive oxygen species that enhances insulin signal transduction.

Applications

Suitable for use in Western Blot and Immunohistochemistry. Other applications not tested.

Recommended Dilution

Western Blot: 2ug/ml, Recognizes a band at ~67 kD, representing isoform 1.

Immunohistochemistry: 5ug/ml

Optimal dilution determined by the researcher.

Storage and Stability

Store product at 4°C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20°C. Aliquots are stable at -20°C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates.

For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Synthetic peptide made to a region within residues 100-200 of the human NOX4. Cellular Localization: Endoplasmic reticulum, endoplasmic reticulum membrane, multi-pass membrane protein, cell membrane, nucleus (probable).

Formulation

Supplied as a liquid in Tris-citrate-phosphate, pH 7-8. Labeled with horseradish peroxidase (HRP)

Purity

Purified by immunoaffinity chromatography.

Specificity



Recognizes human NOX4. Species Homology: 100% mouse, rat, bovine, sheep, and monkey proteins.

Product Type

Pab

Source

human

Isotype

IgG

Grade

Affinity Purified

Applications

IHC WB

Crossreactivity

Bo Hu Mk Mo Rt Sh

Storage

4°C Do Not Freeze

Detection Method

HRP