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

Catalog number

N5376-77

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.

Cellular Localization

Endoplasmic reticulum, endoplasmic reticulum membrane, multi-pass membrane protein, cell membrane, nucleus (probable).

Applications

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

Recommended Dilution

Optimal dilutions to be determined by the researcher.

Storage and Stability

May be stored at 4°C. For long-term storage, aliquot and store at 4°C. Do not freeze. Aliquots are stable for 12 months. For maximum recovery of product, centrifuge the original vial prior to removing the cap. Further dilutions can be made in assay buffer.

Immunogen

A synthetic peptide made to a region within residues 100-200 of the human NOX4 protein sequence. [Swiss-Prot# Q9NPH5]. Homology: 100% human, mouse, rat, cow, sheep, and monkey proteins.

Formulation

Supplied as a liquid in Tris-citrate/phosphate, pH 7-8.

Purity

Purified by peptide immunoaffinity chromatography.

Specificity

Species Crossreactivity: This antibody reacts with human protein. Other species have not been tested.

Product Type

Pab

Source

human

Isotype

IgG

Grade

Affinity Purified

Applications

IHC WB

Crossreactivity

Hu

Storage

4°C Do Not Freeze