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NOX1 Antibody

Catalog # ASC11832

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y5S8
Other Accession	NP_008983, 148536873
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	64871
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NOX1 antibody can be used for detection of NOX1 by Western blot at 1 - 2 g/ml. Antibody can also be used for Immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	27035
Other Names	NADPH oxidase 1, NOX-1, 1.-.-.-, Mitogenic oxidase 1, MOX-1, NADH/NADPH mitogenic oxidase subunit P65-MOX, NOH-1, NOX1, MOX1, NOH1
Target/Specificity	NOX1; NOX1 antibody is human specific.
Reconstitution & Storage	NOX1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	NOX1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NOX1 (HGNC:7889)
Synonyms	MOX1, NOH1
Function	NADPH oxidase that catalyzes the generation of superoxide from molecular oxygen utilizing NADPH as an electron donor.
Cellular Location	Cell projection, invadopodium membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein
Tissue Location	[Isoform NOH-1L]: Detected in colon, uterus, prostate, and colon carcinoma, but not in peripheral blood leukocytes

Background

Voltage-gated proton (hydrogen) channels play an important role in cellular defense against acidic stress (1). NOX1 is a homolog of the catalytic subunit of the superoxide-generating NADPH oxidase of phagocytes, gp91phox (1). Three splice variants of NOX1 have been identified, NOH-1L, NOH-1S and NOH-1Lv (2). NOH-1S is a voltage-gated proton channel that participates in the regulation of cellular pH and is blocked by zinc. NOH-1L is a pyridine nucleotide-dependent oxidoreductase that generates superoxide and might conduct H(+) ions as part of its electron transport mechanism, whereas NOH-1S does not contain an electron transport chain (1-3). NOX1 have the potential to be effective treatments for a range of ischemic diseases (4).

References

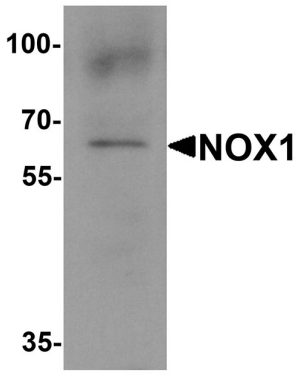
Helmcke I, Heumuller S, Tikkanen R, et al. Identification of structural elements in Nox1 and Nox4 controlling localization and activity. Antioxid. Redox Signal. 2009; 11:1279-87.

Piccoli C, D'Aprile A, Ripoli M, et al. Bone-marrow derived hematopoietic stem/progenitor cells express multiple isoforms of NADPH oxidase and produce constitutively reactive oxygen species. Biochem. Biophys. Res. Commun. 2007; 353:965-72.

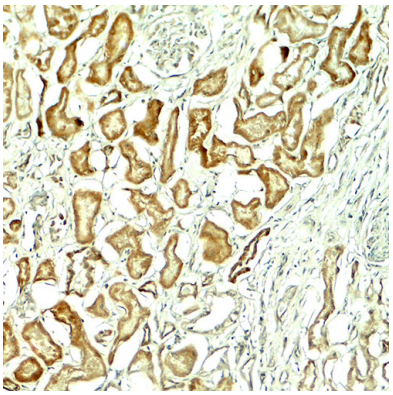
Lee JG, Lim EJ, Park DW, et al. A combination of Lox-1 and Nox1 regulates TLR9-mediated foam cell formation. Cell Signal. 2008; 20:2266-75.

Stanic B, Katsuyama M, and Miller FJ Jr. An oxidized extracellular oxidation-reduction state increases Nox1 expression and proliferation in vascular smooth muscle cells via epidermal growth factor receptor activation. Arterioscler. Thromb. Vasc. Biol. 2010; 30:2234-41.

Images

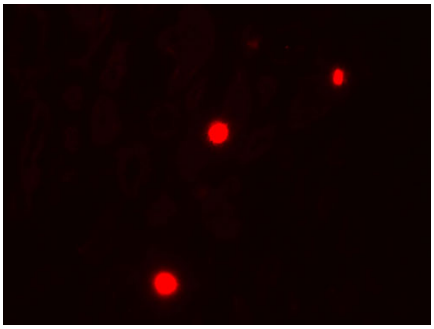


Western blot analysis of NOX1 in 293 cell lysate with NOX1 antibody at 1 µg/ml.



Immunohistochemistry of NOX1 in human kidney tissue with NOX1 antibody at 5 µg/ml.

Immunofluorescence of NOX1 in human kidney tissue with NOX1 antibody at 20 µg/ml.



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