

# Mox1 (H-75): sc-25545

## BACKGROUND

Mox1 and the glycoprotein gp91-phox are largely related proteins that are essential components of the NADPH oxidase. The superoxide-generating NADPH oxidase is present in phagocytes, neuroepithelial bodies, vascular smooth muscle cells, and endothelial cells. It includes a membrane-bound flavocytochrome containing two subunits, gp91-phox and p22-phox, and the cytosolic proteins p47-phox and p67-phox. During activation of the NADPH oxidase, p47-phox and p67-phox migrate to the plasma membrane where they associate with the flavocytochrome, cytochrome b558, to form the active enzyme complex. The p22 and gp91-phox subunits also function as surface O<sub>2</sub> sensors that initiate cellular signaling in response to hypoxic conditions. Mox1 and gp91 contain identical C-terminal sequence identity, yet they have distinct expression patterns. gp91-phox is expressed in eosinophils, neutrophils, monocytes, and B-lymphocytes, whereas Mox1 is predominantly detected in the colon, and low expression is also detected in the uterus and prostate. Mox1 is also upregulated in vascular smooth muscle cells in response to PDGF stimulation, which collectively indicates that Mox1 may function analogously to gp91-phox, yet regulate the NADPH superoxide production in non-phagocytic cells.

## CHROMOSOMAL LOCATION

Genetic locus: NOX1 (human) mapping to Xq22.1; Nox1 (mouse) mapping to X E3.

## SOURCE

Mox1 (H-75) is a rabbit polyclonal antibody raised against amino acids 121-195 of Mox1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-25545 AC, 500 µg/0.25 ml agarose in 1 ml.

## APPLICATIONS

Mox1 (H-75) is recommended for detection of Mox1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mox1 siRNA (h): sc-43939, Mox1 siRNA (m): sc-43940, Mox1 shRNA Plasmid (h): sc-43939-SH, Mox1 shRNA Plasmid (m): sc-43940-SH, Mox1 shRNA (h) Lentiviral Particles: sc-43939-V and Mox1 shRNA (m) Lentiviral Particles: sc-43940-V.

Molecular Weight of Mox1 isoforms: 65/59/22.

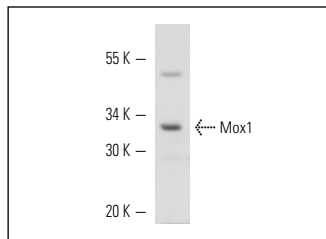
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

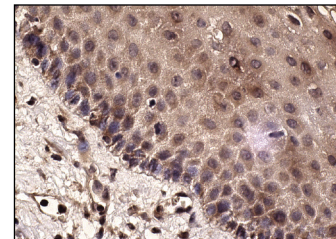
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Mox1 (H-75): sc-25545. Western blot analysis of human recombinant Mox1.



Mox1 (H-75): sc-25545. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells.

## SELECT PRODUCT CITATIONS

- Díaz-Cruz, A., et al. 2007. Adrenaline stimulates H<sub>2</sub>O<sub>2</sub> generation in liver via NADPH oxidase. *Free Radic. Res.* 41: 663-672.
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- Csiszar, A., et al. 2008. Endothelial function and vascular oxidative stress in long-lived GH/IGF-deficient Ames dwarf mice. *Am. J. Physiol. Heart Circ. Physiol.* 295: 1882-1894.
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- Wittrant, Y., et al. 2009. Colony-stimulating factor-1 (CSF-1) directly inhibits receptor activator of nuclear factor-κB ligand (RANKL) expression by osteoblasts. *Endocrinology* 150: 4977-4988.
- Kim, H.J., et al. 2010. Roles of NADPH oxidases in cisplatin-induced reactive oxygen species generation and ototoxicity. *J. Neurosci.* 30: 3933-3946.
- Trott, D.W., et al. 2011. NAD(P)H oxidase-derived reactive oxygen species contribute to age-related impairments of endothelium-dependent dilation in rat soleus feed arteries. *J. Appl. Physiol.* 110: 1171-1180.
- Woolley, J.F., et al. 2012. H<sub>2</sub>O<sub>2</sub> production downstream of FLT3 is mediated by p22-phox in the endoplasmic reticulum and is required for STAT5 signalling. *PLoS ONE* 7: e34050.
- Pervin, S., et al. 2013. Oxidative stress specifically downregulates survivin to promote breast tumour formation. *Br. J. Cancer* 108: 848-858.