

# Nox4 (H-300): sc-30141

## BACKGROUND

The superoxide-generating NADPH oxidase 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. Nox4 (also known as Renox) is a renal gp91-phox homolog highly expressed at the site of erythropoietin production in the proximal convoluted tubule epithelial cells of the renal cortex. Nox4 is also expressed in fetal tissues, placenta, glioblastoma and vascular cells. Like gp91-phox, the enzymatic activity of Nox4 produces superoxide anions. In vascular cells, the addition of Angiotensin II increases Nox4 expression, which suggests a role for Nox4 in vascular oxidative stress response. The gene encoding human Nox4 maps to chromosome 11q14.3.

## CHROMOSOMAL LOCATION

Genetic locus: NOX4 (human) mapping to 11q14.3; Nox4 (mouse) mapping to 7 D3.

## SOURCE

Nox4 (H-300) is a rabbit polyclonal antibody raised against amino acids 201-300 mapping within an internal region of Nox4 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.

## APPLICATIONS

Nox4 (H-300) is recommended for detection of Nox4 of human and, to a lesser extent, mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Nox4 (H-300) is also recommended for detection of Nox4 in additional species, including bovine.

Suitable for use as control antibody for Nox4 siRNA (h): sc-41586, Nox4 siRNA (m): sc-41587, Nox4 siRNA (r): sc-61887, Nox4 shRNA Plasmid (h): sc-41586-SH, Nox4 shRNA Plasmid (m): sc-41587-SH, Nox4 shRNA Plasmid (r): sc-61887-SH, Nox4 shRNA (h) Lentiviral Particles: sc-41586-V, Nox4 shRNA (m) Lentiviral Particles: sc-41587-V and Nox4 shRNA (r) Lentiviral Particles: sc-61887-V.

Molecular Weight of Nox4: 70 kDa.

Positive Controls: Nox4 (h): 293T Lysate: sc-115840 or SK-N-MC cell lysate: sc-2237.

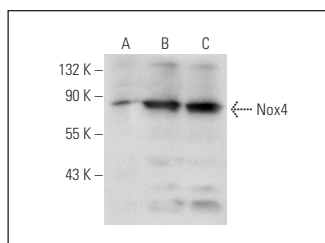
## STORAGE

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

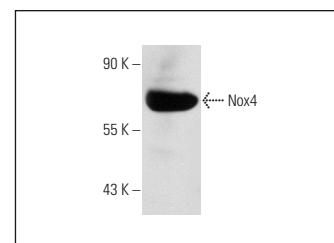
## RESEARCH USE

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

## DATA



Nox4 (H-300): sc-30141. Western blot analysis of Nox4 expression in non-transfected 293T: sc-117752 (A), human Nox4 transfected 293T: sc-115840 (B) and SK-N-MC (C) whole cell lysates.



Nox4 (H-300): sc-30141. Western blot analysis of Nox4 expression in mouse placenta tissue extract.

## SELECT PRODUCT CITATIONS

- Wei, X.F., et al. 2009. Advanced oxidation protein products induce mesangial cell perturbation through PKC-dependent activation of NADPH oxidase. *Am. J. Physiol. Renal Physiol.* 296: F427-F437.
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- Culcasi, M., et al. 2012. EPR spin trapping evaluation of ROS production in human fibroblasts exposed to cerium oxide nanoparticles: evidence for NADPH oxidase and mitochondrial stimulation. *Chem. Biol. Interact.* 199: 161-176.
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- Moreno, M.U., et al. 2013. Decreased Nox4 levels in the myocardium of patients with aortic valve stenosis. *Clin. Sci.* 125: 291-300.
- Du, J., et al. 2013. Crucial roles of Nox2-derived oxidative stress in deteriorating the function of Insulin receptors and endothelium in dietary obesity of middle-aged mice. *Br. J. Pharmacol.* 170: 1064-1077.
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Try **Nox4 (3H2G11): sc-517188**, our highly recommended monoclonal alternative to Nox4 (H-300).