

Nox3 (M-55): sc-67005

BACKGROUND

Nox3 (GP91-3, NADPH oxidase 3) is a plasma membrane-associated enzyme that catalyzes the production of superoxide by a one-electron reduction of oxygen, using NADPH as the electron donor. Nox3 contains six membrane-spanning regions, conserved flavin and pyridine nucleotide-binding sites, and histidines possibly involved in heme ligation. It functions together with p22phox as an enzyme constitutively producing superoxide. Nox3 expression promotes p22phox transport to the plasma membrane and can be inhibited by mutations in the p22phox binding sites (SH3 domains) of p47phox or Nox1. Nox3 localizes to the vestibular and cochlear sensory epithelia and to spiral ganglions and participates in otoconia formation in inner ears, which is required for perception of balance and gravity.

REFERENCES

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3. Cheng, G., et al. 2004. Nox3 regulation by NOXO1, p47phox, and p67phox. *J. Biol. Chem.* 279: 34250-34255.
4. Banfi, B., et al. 2004. Nox3, a superoxide-generating NADPH oxidase of the inner ear. *J. Biol. Chem.* 279: 46065-46072.
5. Ueno, N., et al. 2005. The NADPH oxidase Nox3 constitutively produces superoxide in a p22phox-dependent manner: its regulation by oxidase organizers and activators. *J. Biol. Chem.* 280: 23328-23339.
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7. Hordijk, P.L. 2006. Regulation of NADPH oxidases: the role of Rac proteins. *Circ. Res.* 98: 453-462.
8. Geiszt, M. 2006. NADPH oxidases: New kids on the block. *Cardiovasc. Res.* 71: 289-299.

CHROMOSOMAL LOCATION

Genetic locus: NOX3 (human) mapping to 6q25.3; Nox3 (mouse) mapping to 17 A1.

SOURCE

Nox3 (M-55) is a rabbit polyclonal antibody raised against amino acids 231-285 mapping within an extracellular domain of Nox3 of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Nox3 (M-55) is recommended for detection of Nox3 of mouse, rat and, to a lesser extent, 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 Nox3 siRNA (h): sc-45484, Nox3 siRNA (m): sc-45485, Nox3 shRNA Plasmid (h): sc-45484-SH, Nox3 shRNA Plasmid (m): sc-45485-SH, Nox3 shRNA (h) Lentiviral Particles: sc-45484-V and Nox3 shRNA (m) Lentiviral Particles: sc-45485-V.

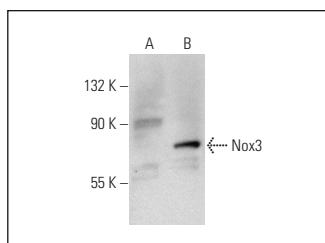
Molecular Weight of Nox3: 65 kDa.

Positive Controls: Nox3 (h): 293T Lysate: sc-173365.

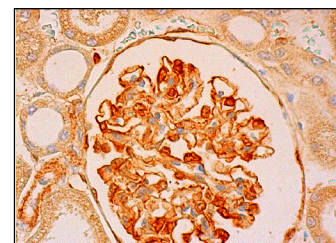
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Nox3 (M-55): sc-67005. Western blot analysis of Nox3 expression in non-transfected: sc-117752 (A) and human Nox3 transfected: sc-173365 (B) 293T whole cell lysates.



Nox3 (M-55): sc-67005. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in glomeruli and cytoplasmic staining of cells in tubules.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.