

Nox5 (H-160): sc-67006

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 O₂ sensors that initiate cellular signaling in response to hypoxic conditions. NADPH oxidase 5 (Nox5) is a homolog of the gp91 phox subunit of the phagocyte NADPH oxidase. Nox5 is expressed in lymphoid organs and testis and is distinguished from the other NADPH oxidases by its unique N-terminus, which contains three canonical EF-hands, Ca²⁺-binding domains. Upon heterologous expression, Nox5 generates superoxide in response to intracellular Ca²⁺ elevations.

CHROMOSOMAL LOCATION

Genetic locus: NOX5 (human) mapping to 15q23.

SOURCE

Nox5 (H-160) is a rabbit polyclonal antibody raised against amino acids 606-765 mapping within a C-terminal extracellular domain of Nox5 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.

STORAGE

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

APPLICATIONS

Nox5 (H-160) is recommended for detection of Nox5 of 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).

Nox5 (H-160) is also recommended for detection of Nox5 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Nox5 siRNA (h): sc-45486, Nox5 shRNA Plasmid (h): sc-45486-SH and Nox5 shRNA (h) Lentiviral Particles: sc-45486-V.

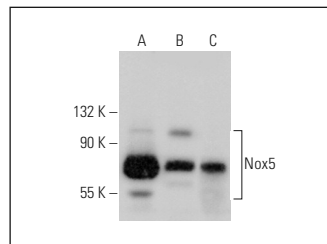
Molecular Weight of Nox5: 86 kDa.

Positive Controls: human spleen extract: sc-363779, human liver extract: sc-363766 or human testis extract: sc-363781.

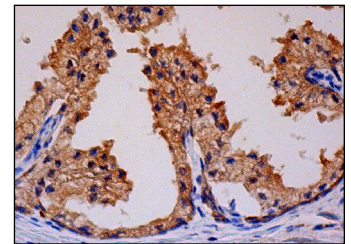
RECOMMENDED SECONDARY REAGENTS

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



Nox5 (H-160): sc-67006. Western blot analysis of Nox5 expression in human testis (A), human liver (B) and human spleen (C) tissue extracts.



Nox5 (H-160): sc-67006. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Heng, X., et al. 2011. Sall3 correlates with the expression of TH in mouse olfactory bulb. *J. Mol. Neurosci.* 46: 293-302.
- Manea, A., et al. 2012. Positive regulation of NADPH oxidase 5 by proinflammatory-related mechanisms in human aortic smooth muscle cells. *Free Radic. Biol. Med.* 52: 1497-1507.
- Holterman, C.E., et al. 2014. Nephropathy and elevated BP in mice with podocyte-specific NADPH oxidase 5 expression. *J. Am. Soc. Nephrol.* 25: 784-797.

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.