

NOXA1 (I-16)-R: sc-160597-R

BACKGROUND

NOXA1 (NADPH oxidase activator 1), also known as p51NOX, NY-CO-31 or SDCCAG31, is a widely expressed 476 amino acid cytoplasmic protein belonging to the NCF2/NOXA1 family. NOXA1 functions as an activator of Mox1, a superoxide-producing NADPH oxidase, which is present in phagocytes, neuroepithelial bodies, vascular smooth muscle cells and endothelial cells. During activation of the Mox1, p47-phox and p67-phox migrate to the plasma membrane where they associate with cytochrome b558 to form an active enzyme complex. NOXA1 may be involved in the production of reactive oxygen species (ROS). ROS participates in a variety of biological processes including host defense, hormone biosynthesis, oxygen sensing and signal transduction. Expressed as three isoforms produced by alternative splicing events, it is suggested that NOXA1 may also activate gp91phox and Nox3.

REFERENCES

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- Cheng, G., et al. 2004. NOXO1, regulation of lipid binding, localization, and activation of Nox1 by the Phox homology (PX) domain. *J. Biol. Chem.* 279: 4737-4742.
- Kawahara, T., et al. 2004. Role of nicotinamide adenine dinucleotide phosphate oxidase 1 in oxidative burst response to Toll-like receptor 5 signaling in large intestinal epithelial cells. *J. Immunol.* 172: 3051-3058.
- Lassègue, B., et al. 2006. Nox is playing with a full deck in vascular smooth muscle, a commentary on "NOXA1 is a central component of the smooth muscle NADPH oxidase in mice". *Free Radic. Biol. Med.* 41: 185-187.
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CHROMOSOMAL LOCATION

Genetic locus: Noxa1 (mouse) mapping to 2 A3.

SOURCE

NOXA1 (I-16)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of NOXA1 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.

Blocking peptide available for competition studies, sc-160597 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NOXA1 (I-16)-R is recommended for detection of NOXA1 of 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); non cross-reactive with NOXA.

Suitable for use as control antibody for NOXA1 siRNA (m): sc-150038, NOXA1 shRNA Plasmid (m): sc-150038-SH and NOXA1 shRNA (m) Lentiviral Particles: sc-150038-V.

Molecular Weight of NOXA1: 51 kDa.

Positive Controls: NOXA1 (h): 293T Lysate: sc-112012.

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.

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.

PROTOCOLS

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