

p47-phox (H-195): sc-14015

BACKGROUND

The hereditary disease chronic granulomatous disease (CGD) has been linked to mutations in p47-phox and p67-phox. The cytosolic proteins p47-phox and p67-phox, also designated neutrophil cytosol factor (NCF)1 and NCF2, respectively, are required for activation of the superoxide-producing NADPH oxidase in neutrophils and other phagocytic cells. During activation of the NADPH oxidase, p47-phox and p67-phox migrate to the plasma membrane where they associate with cytochrome b558 and the small G protein Rac to form the functional enzyme complex. Both p47-phox and p67-phox contain two Src homology 3 (SH3) domains. The C-terminal SH3 domain of p67-phox has been shown to interact with the proline rich domain of p47-phox, suggesting that p47-phox may facilitate the transport of p67-phox to the membrane.

CHROMOSOMAL LOCATION

Genetic locus: NCF1 (human) mapping to 7q11.23; Ncf1 (mouse) mapping to 5 G2.

SOURCE

p47-phox (H-195) is a rabbit polyclonal antibody raised against amino acids 196-390 of p47-phox 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

p47-phox (H-195) is recommended for detection of p47-phox 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 p47-phox siRNA (h): sc-29422, p47-phox siRNA (m): sc-36157, p47-phox shRNA Plasmid (h): sc-29422-SH, p47-phox shRNA Plasmid (m): sc-36157-SH, p47-phox shRNA (h) Lentiviral Particles: sc-29422-V and p47-phox shRNA (m) Lentiviral Particles: sc-36157-V.

Molecular Weight of p47-phox: 47 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HL-60 + DMSO cell lysate: sc-24703 or RAW 264.7 whole cell lysate: sc-2211.

STORAGE

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

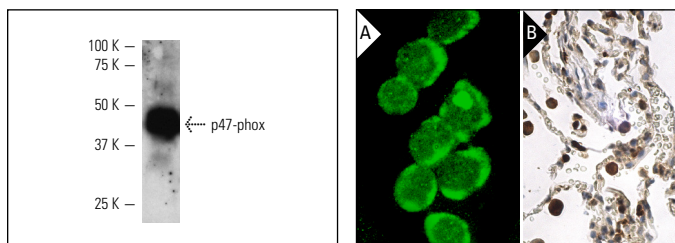
PROTOCOLS

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

RESEARCH USE

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

DATA



p47-phox (H-195) : sc-14015. Western blot analysis of p47-phox expression in HL-60 whole cell lysate.

p47-phox (H-195): sc-14015. Immunofluorescence staining of methanol-fixed HL-60 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic and nuclear staining of macrophages and pneumocytes (B).

SELECT PRODUCT CITATIONS

- Grote, K., et al. 2003. Mechanical stretch enhances mRNA expression and proenzyme release of matrix metalloproteinase-2 (MMP-2) via NAD(P)H oxidase-derived reactive oxygen species. *Circ. Res.* 92: e80-86.
- Feridooni, T., et al. 2011. Cardiomyocyte specific ablation of p53 is not sufficient to block doxorubicin induced cardiac fibrosis and associated cytoskeletal changes. *PLoS ONE* 6: e22801.
- Cheng, S.E., et al. 2011. Cigarette smoke extract regulates cytosolic phospholipase A2 expression via NADPH oxidase/MAPKs/AP-1 and p300 in human tracheal smooth muscle cells. *J. Cell. Biochem.* 112: 589-599.
- Lee, C.W., et al. 2011. Activation and induction of cytosolic phospholipase A2 by TNF-α mediated through Nox2, MAPKs, NFκB, and p300 in human tracheal smooth muscle cells. *J. Cell. Physiol.* 226: 2103-2114.
- Pan, X., et al. 2011. Inhibition of arsenic-induced rat liver injury by grape seed extract through suppression of NADPH oxidase and TGF-β/Smad activation. *Toxicol. Appl. Pharmacol.* 254: 323-331.
- Teng, L., et al. 2012. Divergent effects of p47(phox) phosphorylation at S303-4 or S379 on tumor necrosis factor-α signaling via TRAF4 and MAPK in endothelial cells. *Arterioscler. Thromb. Vasc. Biol.* 32: 1488-1496.
- Zhao, L., et al. 2012. Extracellular signal-regulated kinase 1/2 activation is involved in intermedin1-53 attenuating myocardial oxidative stress injury induced by ischemia/reperfusion. *Peptides* 33: 329-335.



Try **p47-phox (D-10): sc-17845** or **p47-phox (A-7): sc-17844**, our highly recommended monoclonal alternatives to p47-phox (H-195). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **p47-phox (D-10): sc-17845**.