SANTA CRUZ BIOTECHNOLOGY, INC.

p67-phox (C-19): sc-7662

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The heredity disease chronic granulomatous disease (CGF) 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 faciliate the transport of p67-phox to the membrane.

CHROMOSOMAL LOCATION

Genetic locus: NCF2 (human) mapping to 1q25.3.

SOURCE

p67-phox (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of p67-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.

Blocking peptide available for competition studies, sc-7662 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

p67-phox (C-19) is recommended for detection of p67-phox 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for p67-phox siRNA (h): sc-36163, p67-phox shRNA Plasmid (h): sc-36163-SH and p67-phox shRNA (h) Lentiviral Particles: sc-36163-V.

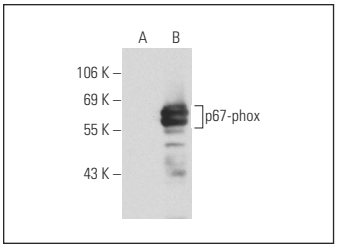
Molecular Weight of p67-phox: 67 kDa.

Positive Controls: p67-phox (h): 293T Lysate: sc-175244, HL-60 + PMA cell lysate: sc-24705 or THP-1 cell lysate: sc-2238.

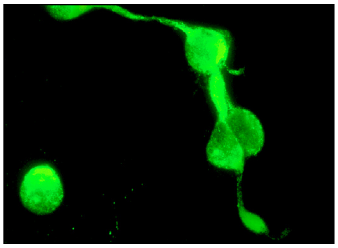
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



p67-phox (C-19): sc-7662. Western blot analysis of p67-phox expression in non-transfected: sc-117752 (**A**) and human p67-phox transfected: sc-175244 (**B**) 293T whole cell lysates.



p67-phox (C-19): sc-7662. Immunofluorescence staining of methanol-fixed, PMA-induced HL-60 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Bek, M.J., et al. 2003. Upregulation of early growth response gene-1 via the CXCR-3 receptor induces reactive oxygen species and inhibits Na^+/K^+-ATPase activity in an immortalized human proximal tubule cell line. J. Immunol. 170: 931-940.
2. Paclet, M.H., et al. 2007. Regulation of phagocyte NADPH oxidase activity: identification of two cytochrome b558 activation states. FASEB J. 21: 1244-1255.
3. Salmen, S., et al. 2010. HIV-1 Nef associates with p22-phox, a component of the NADPH oxidase protein complex. Cell. Immunol. 263: 166-171.
4. Debeurme, F., et al. 2010. Regulation of NADPH oxidase activity in phagocytes: relationship between FAD/NADPH binding and oxidase complex assembly. J. Biol. Chem. 285: 33197-33208.
5. Xie, W., et al. 2012. Effect of exercise training on nitric oxide and superoxide/H_2O_2 signaling pathways in collateral-dependent porcine coronary arterioles. J. Appl. Physiol. 112: 1546-1555.

MONOS Satisfaction Guaranteed

Try **p67-phox (D-6): sc-374510**, our highly recommended monoclonal aternative to p67-phox (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p67-phox (D-6): sc-374510**.