

# p67-phox (N-19): sc-7663

## BACKGROUND

The hereditary 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 facilitate the transport of p67-phox to the membrane.

## CHROMOSOMAL LOCATION

Genetic locus: NCF2 (human) mapping to 1q25.3; Ncf2 (mouse) mapping to 1 G3.

## SOURCE

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

p67-phox (N-19) is available conjugated phycoerythrin (sc-7663 PE, 200 µg/ml), for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-7663 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p67-phox (N-19) is recommended for detection of p67-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), flow cytometry (1 µg per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p67-phox (N-19) is also recommended for detection of p67-phox in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for p67-phox siRNA (h): sc-36163, p67-phox siRNA (m): sc-36164, p67-phox shRNA Plasmid (h): sc-36163-SH, p67-phox shRNA Plasmid (m): sc-36164-SH, p67-phox shRNA (h) Lentiviral Particles: sc-36163-V and p67-phox shRNA (m) Lentiviral Particles: sc-36164-V.

Molecular Weight of p67-phox: 67 kDa.

Positive Controls: p67-phox (m): 293T Lysate: sc-122337, HL-60 whole cell lysate: sc-2209 or HL-60 + DMSO cell lysate: sc-24703.

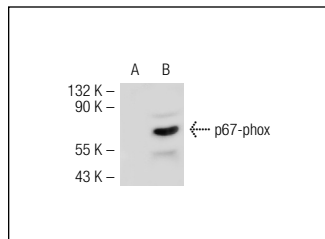
## RESEARCH USE

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

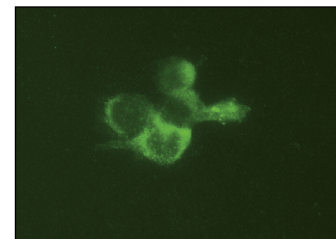
## STORAGE

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

## DATA



p67-phox (N-19): sc-7663. Western blot analysis of p67-phox expression in non-transfected: sc-117752 (A) and mouse p67-phox transfected: sc-122337 (B) 293T whole cell lysates.



p67-phox (N-19): sc-7663. Immunofluorescence staining of methanol-fixed, PMA-induced HL-60 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Egger, T., et al. 2001. Modulation of microglial superoxide production by  $\alpha$ -tocopherol *in vitro*: attenuation of p67-phox translocation by a protein phosphatase-dependent pathway. *J. Neurochem.* 79: 1169-1182.
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3. Kim, H.J., et al. 2010. Roles of NADPH oxidases in cisplatin-induced reactive oxygen species generation and ototoxicity. *J. Neurosci.* 30: 3933-3946.
4. Thakur, S., et al. 2010. Inactivation of adenosine A2A receptor attenuates basal and angiotensin II-induced Ros production by Nox2 in endothelial cells. *J. Biol. Chem.* 285: 40104-40113.
5. Alexandru, N., et al. 2011. Platelet activation in hypertension associated with hypercholesterolemia: effects of irbesartan. *J. Thromb. Haemost.* 9: 173-184.
6. Hultqvist, M., et al. 2011. Positioning of a polymorphic quantitative trait nucleotide in the Ncf1 gene controlling oxidative burst response and arthritis severity in rats. *Antioxid. Redox Signal.* 14: 2373-2383.
7. Lakshmanan, A.P., et al. 2011. Curcumin attenuates hyperglycaemia-mediated AMPK activation and oxidative stress in cerebrum of streptozotocin-induced diabetic rat. *Free Radic. Res.* 45: 788-795.
8. Teng, L., et al. 2012. Divergent effects of p47-phox phosphorylation at S303-4 or S379 on tumor necrosis factor- $\alpha$  signaling via TRAF4 and MAPK in endothelial cells. *Arterioscler. Thromb. Vasc. Biol.* 32: 1488-1496.

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