SANTA CRUZ BIOTECHNOLOGY, INC.

p67-phox (H-300): sc-15342

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; Ncf2 (mouse) mapping to 1 G3.

SOURCE

p67-phox (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 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.

APPLICATIONS

p67-phox (H-300) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p67-phox (H-300) 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 (h): 293T Lysate: sc-175244, p67-phox (m): 293T Lysate: sc-122337 or HL-60 whole cell lysate: sc-2209.

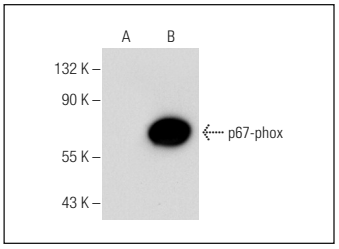
STORAGE

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

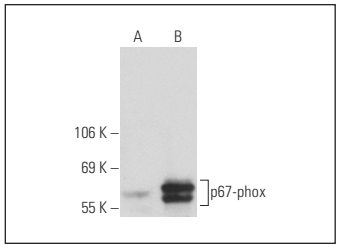
RESEARCH USE

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

DATA



p67-phox (H-300): sc-15342. 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 (H-300): sc-15342. 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.

SELECT PRODUCT CITATIONS

1. Jackson, S.H., et al. 2004. T cells express a phagocyte-type NADPH oxidase that is activated after T cell receptor stimulation. Nat. Immunol. 5: 818-827.
2. Shoeb, M., et al. 2010. Progesterone-induced reorganisation of NOX-2 components in membrane rafts is critical for sperm functioning in *Capra hircus*. Andrologia 42: 356-365.
3. Chandrasekhar, K., et al. 2010. Blue light exposure targets NADPH oxidase to plasma membrane and nucleus in wheat coleoptiles. J. Plant Growth Regul. 29: 232-241.
4. Nitti, M., et al. 2010. PKC δ and NADPH oxidase in retinoic acid-induced neuroblastoma cell differentiation. Cell. Signal. 22: 828-835.
5. Chandrasekhar, A., et al. 2011. Modulation of nicotinamide adenine dinucleotide phosphate oxidase activity through sequential posttranslational modifications of p22 phagocytic oxidase during capacitation and acrosome reaction in goat spermatozoa. J. Anim. Sci. 89: 2995-3007.
6. Ma, F., et al. 2013. Indapamide lowers blood pressure by increasing production of epoxyeicosatrienoic acids in the kidney. Mol. Pharmacol. 84: 286-295.
7. El Chemaly, A., et al. 2014. Hv1 proton channels differentially regulate the pH of neutrophil and macrophage phagosomes by sustaining the production of phagosomal Ros that inhibit the delivery of vacuolar ATPases. J. Leukoc. Biol. E-published.