SANTA CRUZ BIOTECHNOLOGY, INC.

p47-phox (C-20): sc-7660

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 doamin 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: NCF1/NCF1B (human) mapping to 7q11.23; Ncf1 (mouse) mapping to 5 G2.

SOURCE

p47-phox (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of p47-phox of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7660 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p47-phox (C-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p47-phox (C-20) is also recommended for detection of p47-phox in additional species, including bovine and porcine.

Suitable for use as control antibody for p47-phox siRNA (h): sc-29422, p47-phox siRNA (m): sc-36157, p47-phox siRNA (r): sc-45918, p47-phox shRNA Plasmid (h): sc-29422-SH, p47-phox shRNA Plasmid (m): sc-36157-SH, p47-phox shRNA Plasmid (r): sc-45918-SH, p47-phox shRNA (h) Lentiviral Particles: sc-29422-V, p47-phox shRNA (m) Lentiviral Particles: sc-36157-V and p47-phox shRNA (r) Lentiviral Particles: sc-45918-V.

Molecular Weight of p47-phox: 47 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Daudi cell lysate: sc-2415 or RAW 264.7 whole cell lysate: sc-2211.

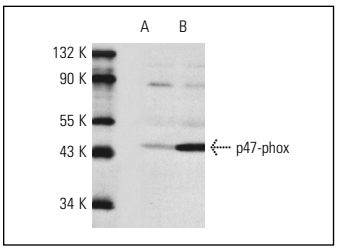
STORAGE

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

RESEARCH USE

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

DATA



p47-phox (C-20): sc-7660. Western blot analysis of p47-phox expression in whole cell lysates prepared from control (**A**) and DMSO treated (**B**) HL-60 cells.

SELECT PRODUCT CITATIONS

1. Egger, T., et al. 2001. Modulation of microglial superoxide production by α-tocopherol *in vitro:* attenuation of p67-phox translocation by a protein phosphatase-dependent pathway. J. Neurochem. 79: 1169-1182.
2. Yoshioka, H., et al. 2011. NADPH oxidase mediates striatal neuronal injury after transient global cerebral ischemia. J. Cereb. Blood Flow Metab. 31: 868-880.
3. Tsai, P.Y., et al. 2011. Antroquinonol reduces oxidative stress by enhancing the Nrf2 signaling pathway and inhibits inflammation and sclerosis in focal segmental glomerulosclerosis mice. Free Radic. Biol. Med. 50: 1503-1516.
4. Tsai, P.Y., et al. 2011. Epigallocatechin-3-gallate prevents lupus nephritis development in mice via enhancing the Nrf2 antioxidant pathway and inhibiting NLRP3 inflammasome activation. Free Radic. Biol. Med. 51: 744-754.
5. Rodriguez-Perez, Al., et al. 2011. Renin angiotensin system and gender differences in dopaminergic degeneration. Mol. Neurodegener. 6: 58.
6. Tang, Y., et al. 2012. Resveratrol reduces vascular cell senescence through attenuation of oxidative stress by SIRT1/NADPH oxidase-dependent mechanisms. J. Nutr. Biochem. 23: 1410-1416.
7. Villar-Cheda, B., et al. 2012. Aging-related changes in the nigral angiotensin system enhances proinflammatory and pro-oxidative markers and 6-OHDA-induced dopaminergic degeneration. Neurobiol. Aging 33: 204.
8. Tsai, P.Y., et al. 2012. Antroquinonol differentially modulates T cell activity and reduces interleukin-18 production, but enhances Nrf2 activation, in murine accelerated severe lupus nephritis. Arthritis Rheum. 64: 232-242.