

p22-phox (C-17): sc-11712

BACKGROUND

Mox1 and the glycoprotein gp91-phox are largely related proteins that are essential components of the NADPH oxidase. The superoxide-generating NADPH oxidase is present in phagocytes, neuroepithelial bodies, vascular smooth muscle cells, and endothelial cells. It includes a membrane-bound flavocytochrome containing two subunits, gp91-phox and p22-phox, and the cytosolic proteins p47-phox and p67-phox. During activation of the NADPH oxidase, p47-phox and p67-phox migrate to the plasma membrane where they associate with the flavocytochrome, cytochrome b558, to form the active enzyme complex. The p22 and gp91-phox subunits also function as surface O₂ sensors that initiate cellular signaling in response to hypoxic conditions.

CHROMOSOMAL LOCATION

Genetic locus: CYBA (human) mapping to 16q24.3; Cyba (mouse) mapping to 8 E1.

SOURCE

p22-phox (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of p22-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-11712 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p22-phox (C-17) is recommended for detection of p22-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).

Suitable for use as control antibody for p22-phox siRNA (h): sc-36149, p22-phox siRNA (m): sc-36150, p22-phox siRNA (r): sc-61892, p22-phox shRNA Plasmid (h): sc-36149-SH, p22-phox shRNA Plasmid (m): sc-36150-SH, p22-phox shRNA Plasmid (r): sc-61892-SH, p22-phox shRNA (h) Lentiviral Particles: sc-36149-V, p22-phox shRNA (m) Lentiviral Particles: sc-36150-V and p22-phox shRNA (r) Lentiviral Particles: sc-61892-V.

Molecular Weight of p22-phox: 22 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or THP-1 cell lysate: sc-2238.

STORAGE

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

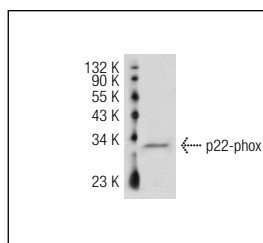
PROTOCOLS

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

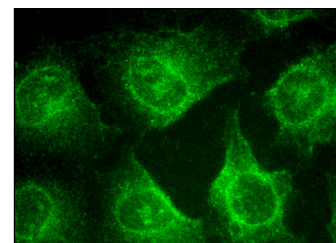
RESEARCH USE

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

DATA



p22-phox (C-17): sc-11712. Western blot analysis of p22-phox expression in RAW 264.7 whole cell lysate.



p22-phox (C-17): sc-11712. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Li, J.M., et al. 2002. Activation of NADPH oxidase during progression of cardiac hypertrophy to failure. *Hypertension* 40: 477-484.
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- Pierce, J.P., et al. 2009. Sex differences in the subcellular distribution of angiotensin type 1 receptors and NADPH oxidase subunits in the dendrites of C1 neurons in the rat rostral ventrolateral medulla. *Neuroscience* 163: 329-338.
- O'Brien, W.J., et al. 2009. NADPH oxidase expression and production of superoxide by human corneal stromal cells. *Mol. Vis.* 15: 2535-2543.
- Sardina, J.L., et al. 2010. p22phox-dependent NADPH oxidase activity is required for megakaryocytic differentiation. *Cell Death Differ.* 17: 1842-1854.
- Descorbeth, M., et al. 2010. Role of vasoactive peptides in high glucose-induced increased expression of G_{αq/11} proteins and associated signaling in vascular smooth muscle cells. *Can. J. Physiol. Pharmacol.* 88: 331-340.
- Moningka, N.C., et al. 2011. Protective actions of nebivolol on chronic nitric oxide synthase inhibition-induced hypertension and chronic kidney disease in the rat: a comparison with angiotensin II receptor blockade. *Nephrol. Dial. Transplant.* 27: 913-920.
- Amoureux, S., et al. 2011. Vascular BDNF expression and oxidative stress during aging and the development of chronic hypertension. *Fundam. Clin. Pharmacol.* 26: 227-234.



Try **p22-phox (E-11): sc-271968** or **p22-phox (CS9): sc-130551**, our highly recommended monoclonal alternatives to p22-phox (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p22-phox (E-11): sc-271968**.