

gp91-phox (C-15): sc-5827

BACKGROUND

Mox1 and the glycoprotein gp91-phox are largely related proteins that are essential components of the NADPH oxidase. The superoxide-generating NADPH oxidase complex expresses 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. The p22- and gp91-phox subunits also function as surface O₂ sensors that initiate cellular signaling in response to hypoxic conditions. Mox1 and gp91 contain identical C-terminal sequence identity, yet possess distinct expression patterns. gp91-phox expresses in eosinophils, neutrophils, monocytes, and B-lymphocytes, whereas Mox1 is predominantly detected in the colon, with low expression in the uterus and prostate. Vascular smooth-muscle cells exhibit upregulation of Mox1 in response to PDGF stimulation, which indicates that Mox1 may function analogously to gp91-phox, yet regulate the NADPH superoxide production in non-phagocytic cells.

CHROMOSOMAL LOCATION

Genetic locus: CYBB (human) mapping to Xp11.4; Cybb (mouse) mapping to X A1.1.

SOURCE

gp91-phox (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of gp91-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-5827 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

gp91-phox (C-15) is recommended for detection of gp91-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).

gp91-phox (C-15) is also recommended for detection of gp91-phox in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for gp91-phox siRNA (h): sc-35503, gp91-phox siRNA (m): sc-35504, gp91-phox siRNA (r): sc-61838, gp91-phox shRNA Plasmid (h): sc-35503-SH, gp91-phox shRNA Plasmid (m): sc-35504-SH, gp91-phox shRNA Plasmid (r): sc-61838-SH, gp91-phox shRNA (h) Lentiviral Particles: sc-35503-V, gp91-phox shRNA (m) Lentiviral Particles: sc-35504-V and gp91-phox shRNA (r) Lentiviral Particles: sc-61838-V.

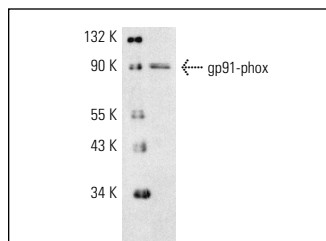
Molecular Weight of gp91-phox: 60/91 kDa.

Positive Controls: A-10 cell lysate: sc-3806, COLO 320DM cell lysate: sc-2226 or Hep G2 cell lysate: sc-2227.

STORAGE

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

DATA



gp91-phox (C-15): sc-5827. Western blot analysis of gp91-phox expression in A-10 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Maack, C., et al. 2003. Oxygen free radical release in human failing myocardium is associated with increased activity of Rac1 GTPase and represents a target for statin treatment. *Circulation* 108: 1567-1574.
2. Bek, M.J., et al. 2003. Upregulation of early growth response gene-1 via the CXCR3 receptor induces reactive oxygen species and inhibits Na⁺/K⁺-ATPase activity in an immortalized human proximal tubule cell line. *J. Immunol.* 170: 931-940.
3. 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.
4. Alexandru, N., et al. 2011. Platelet activation in hypertension associated with hypercholesterolemia: effects of irbesartan. *J. Thromb. Haemost.* 9: 173-184.
5. Yoshioka, H., et al. 2011. NADPH oxidase mediates striatal neuronal injury after transient global cerebral ischemia. *J. Cereb. Blood Flow Metab.* 31: 868-880.
6. Vieira, R.P., et al. 2011. Airway epithelium mediates the anti-inflammatory effects of exercise on asthma. *Respir. Physiol. Neurobiol.* 175: 383-389.
7. Tickner, J., et al. 2011. Nox2-derived ROS in PPAR γ signaling and cell-cycle progression of lung alveolar epithelial cells. *Free Radic. Biol. Med.* 51: 763-772.

RESEARCH USE

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



Try **gp91-phox (54.1): sc-130543** or **gp91-phox (G-1): sc-74514**, our highly recommended monoclonal alternatives to gp91-phox (C-15). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **gp91-phox (54.1): sc-130543**.