SANTA CRUZ BIOTECHNOLOGY, INC.

p22-phox (E-8): sc-271262

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 O_2 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 (E-8) is a mouse monoclonal antibody raised against amino acids 1-195 representing full length p22-phox of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p22-phox (E-8) is recommended for detection of p22-phox of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 shRNA Plasmid (h): sc-36149-SH, p22-phox shRNA Plasmid (m): sc-36150-SH, p22-phox shRNA (h) Lentiviral Particles: sc-36149-V and p22-phox shRNA (m) Lentiviral Particles: sc-36150-V.

Molecular Weight of p22-phox: 22 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, NCI-H929 whole cell lysate: sc-364786 or THP-1 cell lysate: sc-2238.

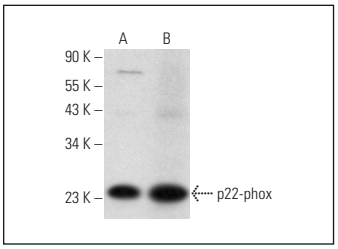
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

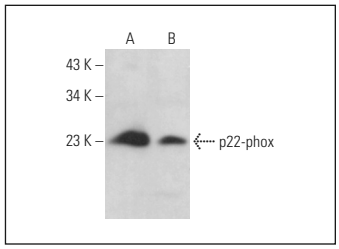
STORAGE

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

DATA



p22-phox (E-8): sc-271262. Western blot analysis of p22-phox expression in NCI-H929 whole cell lysate (**A**) and human spleen tissue extract (**B**).



p22-phox (E-8): sc-271262. Western blot analysis of p22-phox expression in THP-1 (**A**) and HL-60 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ilatovskaya, D.V., et al. 2013. Ros production as a common mechanism of ENaC regulation by EGF, Insulin, and IGF-1. Am. J. Physiol., Cell Physiol. 304: C102-C111.
2. Cai, R., et al. 2020. Tumor necrosis factor α deficiency improves endothelial function and cardiovascular injury in deoxycorticosterone acetate/salt-hypertensive mice. Biomed Res. Int. 2020: 3921074.
3. Blancas-Galicia, L., et al. 2020. Genetic, immunological, and clinical features of the first Mexican cohort of patients with chronic granulomatous disease. J. Clin. Immunol. 40: 475-493.
4. Li, K., et al. 2021. Reduced intracellular chloride concentration impairs angiogenesis by inhibiting oxidative stress-mediated VEGFR2 activation. Acta Pharmacol. Sin. 42: 560-572.
5. Korhonen, E., et al. 2021. Antimycin A-induced mitochondrial dysfunction regulates inflammasome signaling in human retinal pigment epithelial cells. Exp. Eye Res. 209: 108687.
6. Manea, S.A., et al. 2022. Pharmacological inhibition of lysine-specific demethylase 1A reduces atherosclerotic lesion formation in apolipoprotein E-deficient mice by a mechanism involving decreased oxidative stress and inflammation; potential implications in human atherosclerosis. Antioxidants 11: 2382.

RESEARCH USE

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

CONJUGATES

See **p22-phox (E-11): sc-271968** for p22-phox antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.