

p67-phox (h): 293T Lysate: sc-175244

BACKGROUND

The hereditary disease chronic granulomatous disease (CGD) has been linked to mutations in p47-phox and p67-phox. The cytosolic proteins p47-phox and p67-phox, also designated neutrophil cytosol factor 1 (NCF1) 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 facilitate the transport of p67-phox to the membrane.

REFERENCES

1. Lomax, K.J., et al. 1989. Recombinant 47 kDa cytosol factor restores NADPH oxidase in chronic granulomatous disease. *Science* 245: 409-412.
2. Heyworth, P.G., et al. 1991. Neutrophil nicotinamide adenine dinucleotide phosphate oxidase assembly. Translocation of p47-phox and p67-phox requires interaction between p47-phox and cytochrome b558. *J. Clin. Invest.* 87: 352-356.
3. Kenney, R.T., et al. 1993. Characterization of the p67phox gene: genomic organization and restriction fragment length polymorphism analysis for pre-natal diagnosis in chronic granulomatous disease. *Blood* 82: 3739-3744.
4. Finan, P., et al. 1994. An SH3 domain and proline-rich sequence mediate an interaction between two components of the phagocyte NADPH oxidase complex. *J. Biol. Chem.* 269: 13752-13755.
5. Gorlach, A., et al. 1997. A p47-phox pseudogene carries the most common mutation causing p47-phox-deficient chronic granulomatous disease. *J. Clin. Invest.* 100: 1907-1918.

CHROMOSOMAL LOCATION

Genetic locus: NCF2 (human) mapping to 1q25.3.

PRODUCT

p67-phox (h): 293T Lysate represents a lysate of human p67-phox transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

p67-phox (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive p67-phox antibodies. Recommended use: 10-20 µl per lane.

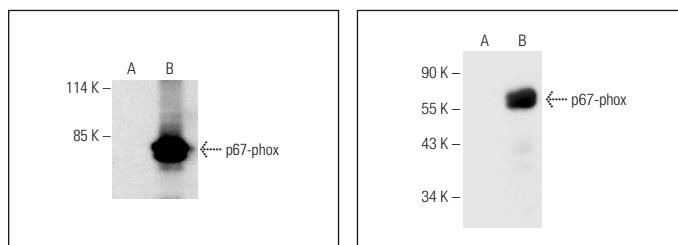
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

p67-phox (D-6): sc-374510 is recommended as a positive control antibody for Western Blot analysis of enhanced human p67-phox expression in p67-phox transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



p67-phox (D-6) HRP: sc-374510 HRP. Direct 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.

p67-phox (D-6): sc-374510. 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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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