



p67-phox (m): 293T Lysate: sc-122337

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 (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 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-kilodalton 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 prenatal 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. Gollach, 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.
6. Park, H.S., et al. 1998. Conformational changes of the leukocyte NADPH oxidase subunit p47(phox) during activation studied through its intrinsic fluorescence. *Biochim. Biophys. Acta* 1387: 406-414.

CHROMOSOMAL LOCATION

Genetic locus: Ncf2 (mouse) mapping to 1 G3.

PRODUCT

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

APPLICATIONS

p67-phox (m): 293T Lysate is suitable as a Western Blotting positive control for mouse 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.

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.

RESEARCH USE

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

PROTOCOLS

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