**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 (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.

**CHROMOSOMAL LOCATION**

Genetic locus: NCF1 (human) mapping to 7q11.23; Ncf1 (mouse) mapping to 5 G2.

**SOURCE**

p47-phox (D-10) is a mouse monoclonal antibody raised against amino acids 196-390 of p47-phox of human origin.

**PRODUCT**

Each vial contains 200 μg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p47-phox (D-10) is available conjugated to agarose (sc-17845 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17845 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-17845 PE), fluorescein (sc-17845 FITC), Alexa Fluor® 488 (sc-17845 AF488) or Alexa Fluor® 647 (sc-17845 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

**APPLICATIONS**

p47-phox (D-10) is recommended for detection of p47-phox of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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).


Molecular Weight of p47-phox: 47 kDa. Positive Controls: HL-60 whole cell lysate: sc-2209, THP-1 cell lysate: sc-2238 or RAW 264.7 whole cell lysate: sc-2211.

**STORAGE**

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

**RESEARCH USE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


5. Roos, D., et al. 2014. Two CGD families with a hypomorphic mutation in p47-phox (D-10): sc-17845. Western blot analysis of p47-phox expression in Ramos (A), Raji (B), NAMALWA (C) and U-256-K (D) whole cell lysates.


**PROTOCOLS**

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

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