p47phox (D-10): sc-17845

BACKGROUND
The hereditary chronic granulomatous disease (CGD) has been linked to mutations in p47phox and p67-phox. The cytosolic proteins p47phox 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, p47phox 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 p47phox 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 p47phox, suggesting that p47phox 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
p47phox (D-10) is a mouse monoclonal antibody raised against amino acids 196-390 of p47phox of human origin.

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

p47phox (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(PE) and ELISA; to either phycoerythrin (sc-17845 PE), fluorescein (sc-17845 FITC), Alexa Fluor® 488 (sc-17845 AF488), Alexa Fluor® 546 (sc-17845 AF546), Alexa Fluor® 594 (sc-17845 AF594) or Alexa Fluor® 647 (sc-17845 AF647), 200 µg/ml, for WB (RGB), IF, IHC(PE) and FCM; and to either Alexa Fluor® 680 (sc-17845 AF680) or Alexa Fluor® 790 (sc-17845 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

APPLICATIONS
p47phox (D-10) is recommended for detection of p47phox of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:5000), 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 p47phox: 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.

DATA

SELECT PRODUCT CITATIONS

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