

#4312 Store at -20°C

p47 phox Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #653361
Swiss-Prot Acc. #P14598

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H	47 kDa	Rabbit**

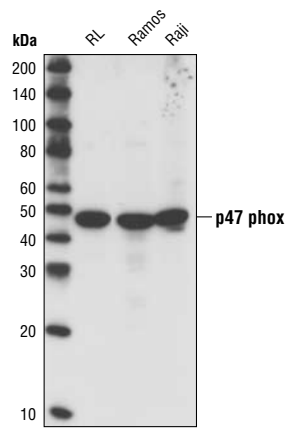
Background: The phagocytic NADPH oxidase is a multiprotein enzyme that catalyzes the reduction of oxygen to superoxide in response to invasion of pathogens into the body. The NADPH oxidase consists of 6 subunits, the membrane-bound p91 phox and p22 phox heterodimer (also known as cytochrome b558), the cytoplasmic complex of p40 phox, p47 phox and p67 phox, and the small GTPase Rac2. Activation of NADPH oxidase is initiated by phosphorylation of the cytosolic complex, which induces conformational changes of the complex and ultimately leads to the translocation of the cytoplasmic complex to the membrane to form an active enzyme with cytochrome b558 (1). Defects in p47 phox cause chronic granulomatous disease (2), and this is often caused by recombinant events between p47 phox and a neighboring highly homologous pseudogene (3,4). Elevated oxidative stress due to increased myocardial NADPH oxidase activity may be a contributing factor for heart failure (5,6).

Specificity/Sensitivity: p47 phox Antibody detects endogenous levels of total p47 phox protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues surrounding Arg292 of human p47 phox. Antibodies are purified by peptide affinity chromatography

Background References:

- (1) Babior, B.M. (1999) *Blood* 93, 1464–76.
- (2) Noack, D. et al. (2001) *Blood* 97, 305–11.
- (3) Görlach, A. et al. (1997) *J Clin Invest* 100, 1907–18.
- (4) Chanock, S.J. et al. (2000) *Blood Cells Mol Dis* 26, 37–46.
- (5) Heymes, C. et al. (2003) *J Am Coll Cardiol* 41, 2164–71.
- (6) Doerries, C. et al. (2007) *Circ Res* 100, 894–903.



Western blot analysis of cell extracts from various cell types using p47 phox Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/vBSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.