Technical Data Sheet

Purified Mouse Anti-Human p47[phox]

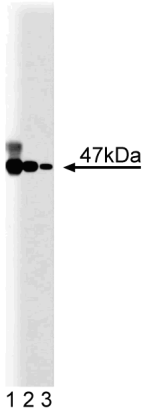
Product Information

Material Number:	**610354**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	1/p47Phox
Immunogen:	Human p47[phox] aa. 18-197
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	47 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The neutrophil respiratory burst oxidase (NADPH-oxidase) generates superoxide and secondary oxygen-derived toxic products in response to bacteria or a variety of soluble stimuli. The enzyme is dormant in resting neutrophils. The active site of this enzyme is located in an integral membrane cytochrome, b558, which consists of the two subunits gp91[phox] and p21[phox]. Superoxide production depends on the formation of a complex that includes two cytosolic proteins, p67[phox] and p47[phox]. The GTP-binding protein Rac is also an essential component for oxidase activity. p47[phox] is a highly basic protein that contains two SH3 domains. The C-terminal quarter of the molecule contains many potential phosphorylation sites, consisting of serines and basic residues. Expression of p47[phox] is restricted to cells of phagocytic or lymphocytic lineage. IFN-γ is a potent inducer of both p47[phox] mRNA and protein. p47[phox] is an early reactant in oxidase assembly and this assembly can be inhibited by a C-terminal peptide of the large subunit of cytochrome b558. It is thought that p47[phox] binds directly to the cytochrome, while p67[phox] associates with the cytochrome by binding p47[phox].

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of p47[phox] on EB-1 lysate. *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of anti-EB-1 antibody.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Ago T, Nunoi H, Ito T, Sumimoto H. Mechanism for phosphorylation-induced activation of the phagocyte NADPH oxidase protein p47(phox). Triple replacement of serines 303, 304, and 328 with aspartates disrupts the SH3 domain-mediated intramolecular interaction in p47(phox), thereby activating the oxidase. *J Biol Chem.* 1999; 274(47):33644-33653.(Clone-specific: Western blot)

Chanock SJ, el Benna J, Smith RM, Babior BM. The respiratory burst oxidase. *J Biol Chem.* 1994; 269(40):24519-24522.(Biology)

Hata K, Ito T, Takeshige K, Sumimoto H. Anionic amphiphile-independent activation of the phagocyte NADPH oxidase in a cell-free system by p47phox and p67phox, both in C terminally truncated forms. Implication for regulatory Src homology 3 domain-mediated interactions. *J Biol Chem.* 1998; 273(7):4232-4236.(Biology)

Jackson SH, Malech HL, Kozak CA, Lomax KJ, Gallin JI, Holland SM. Cloning and functional expression of the mouse homologue of p47phox. *Immunogenetics.* 1994; 39(4):272-275.(Biology)

Shiose A, Sumimoto H. Arachidonic acid and phosphorylation synergistically induce a conformational change of p47phox to activate the phagocyte NADPH oxidase. *J Biol Chem.* 2000; 275(18):13793-13801.(Clone-specific: Western blot)