Technical Data Sheet

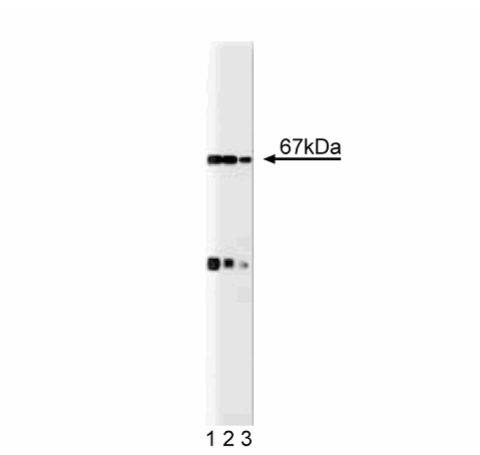
Purified Mouse Anti-p67 [phox]

Product Information

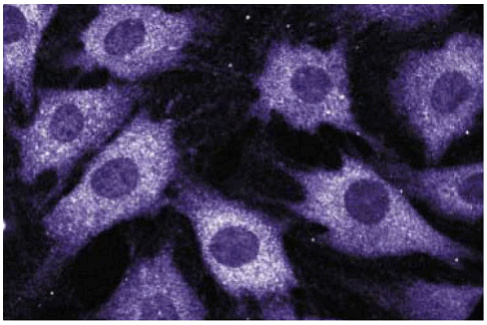
Material Number:	**610913**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	29/p67phox
Immunogen:	Human p67 [phox] aa. 317-469
Isotype:	Mouse IgG2b
Reactivity:	QC Testing: Human Tested in Development: Mouse
Target MW:	67 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% 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 active site of this enzyme is located in an integral membrane cytochrome, b558, that consists of the two subunits gp91 [phox] and p21 [phox]. Superoxide production depends on the formation of a complex that includes p67 [phox], p47 [phox], and the GTP-binding protein Rac. Upon activation, these proteins translocate from the cytosol to the membrane where they assemble with b558 and induce oxidase activity. p67 [phox] contains two SH3 domains and binds, via its C-terminal SH3 domain, to the proline rich region of p47 [phox]. This binding allows p67 [phox] to indirectly associate with the oxidase. It is thought that the phosphorylated forms of p67 [phox] and p47 [phox] interact and that the phosphorylation of p67 [phox] is regulated by both PKC-dependent and independent pathways. Although the role of p67 [phox] in electron flow control is poorly understood, it is thought that it regulates the transfer of electrons from NADPH to reduce flavin.



Western blot analysis of p67 [phox] on a EB-1 cell lysate (Human B lymphoblast; Burkitt's lymphoma; ATCC HTB-60). *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the mouse anti-p67 [phox] antibody.*



Immunofluorescence staining of C3H/10T1/2 cells (Mouse embryonic fibroblasts; ATCC CCL-226).

Preparation and Storage

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

BD Biosciences

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611546	EB1 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

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.(Biology: Western blot)

Benna JE, Dang PM, Gaudry M, et al. Phosphorylation of the respiratory burst oxidase subunit p67(phox) during human neutrophil activation. Regulation by protein kinase C-dependent and independent pathways. *J Biol Chem.* 1997; 272(27):17204-17208.(Biology)

Freeman JL, Lambeth JD. NADPH oxidase activity is independent of p47phox in vitro. *J Biol Chem.* 1996; 271(37):22578-22582.(Biology)

Leto TL, Adams AG, de Mendez I. Assembly of the phagocyte NADPH oxidase: binding of Src homology 3 domains to proline-rich targets. *Proc Natl Acad Sci U S A.* 1994; 91(22):10650-10654.(Biology)

Leto TL, Lomax KJ, Volpp BD, et al. Cloning of a 67-kD neutrophil oxidase factor with similarity to a noncatalytic region of p60c-src. *Science.* 1990; 248(4956):727-730.(Biology)