Technical Data Sheet

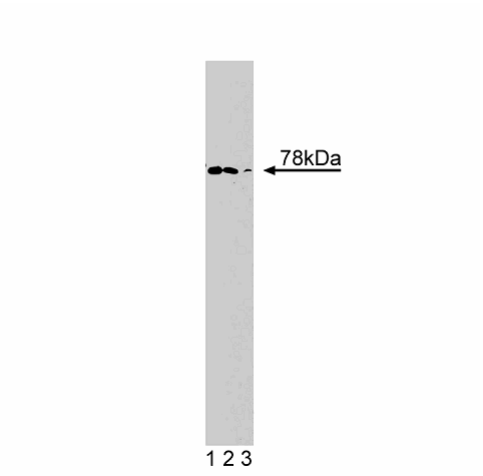
Purified Mouse Anti-βPIX

Product Information

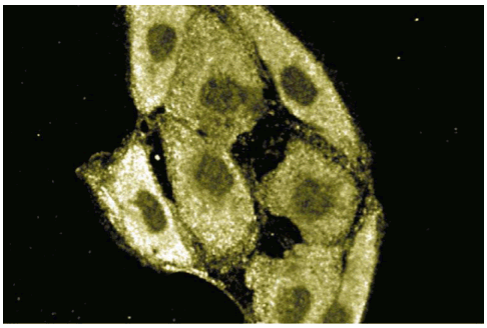
Material Number:	**611648**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	23/bPIX
Immunogen:	Rat βPIX aa. 351-453
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Chicken, Dog, Mouse
Target MW:	78 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The activity of PAK family kinases is regulated through interaction with the small GTPases Cdc42 and Rac1. PAKs are activated by the GTP-bound form of Cdc-42 and Rac1, and recruitment of PAKs to focal complexes has been implicated in Cdc42- and Rac1-dependent regulation of focal contact formation. PAK-interacting exchange factor (PIX) was identified in a screen for proteins that bind PAKs. Two forms of PIX have been identified: an 85 kDa protein designated αPIX and a 78 kDa protein designated βPIX. These proteins have 80% identity in their overlapping regions, which include myosin-like, pleckstrin (PH), Dbl (DH), and SH3 domains. In addition, αPIX contains a calponin-like domain at the N-terminus. The expression of βPIX is ubiquitous, while αPIX is expressed in heart, muscle, and thymus. PIX can act as a guanine nuleotide exchange factor for Rac1 and co-transfection of βPIX, Cdc42, and αPAK results in increased αPAK activity. PIX binding to PAK is required for localization of PAKs to focal complexes and injection of βPIX leads to rac1-dependent membrane ruffling. Thus, PIX is important for PAK localization and activity during small GTPase-dependent regulation of cell morphology.



Western blot analysis of βPIX on PC12 lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of βPIX.*



MDCK

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

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit **bdbiosciences.com/how_to_order/**

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

Bagrodia S, Taylor SJ, Jordon KA, Van Aelst L, Cerione RA. A novel regulator of p21-activated kinases. *J Biol Chem.* 1998; 273(37):23633-23636.(Biology)
Manser E, Loo TH, Koh CG, et al. PAK kinases are directly coupled to the PIX family of nucleotide exchange factors. *Mol Cell.* 1998; 1(2):183-192.(Biology)
Oh WK, Yoo JC, Jo D, Song YH, Kim MG, Park D. Cloning of a SH3 domain-containing proline-rich protein, p85SPR, and its localization in focal adhesion. *Biochem Biophys Res Commun.* 1997; 235(3):794-798.(Biology)
Turner CE, Brown MC, Perrotta JA, et al. Paxillin LD4 motif binds PAK and PIX through a novel 95-kD ankyrin repeat, ARF-GAP protein: A role in cytoskeletal remodeling. *J Cell Biol.* 1999; 145(4):851-863.(Biology)