



# Mouse anti-Rat $\beta$ PIX monoclonal antibody, clone 34/cQJY (CABT-B9367)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

Immunogen	Rat $\beta$ PIX aa. 351-453
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Rat, Mouse, Dog, Chicken
Clone	34/cQJY
Purification	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Conjugate	Unconjugated
Applications	WB; IF
Format	Liquid
Concentration	250 $\mu$ g/ml
Size	50 $\mu$ g
Buffer	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide.
Storage	Store undiluted at $-20^{\circ}\text{C}$ .

## BACKGROUND

**Introduction** 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  $\alpha$  PIX and a 78 kDa protein designated  $\beta$  PIX. These proteins have 80% identity in their overlapping regions, which include myosin-like, pleckstrin (PH), Dbl (DH), and SH3 domains. In addition,  $\alpha$  PIX contains a calponin-like domain at the N-terminus. The expression of  $\beta$  PIX is ubiquitous, while  $\alpha$  PIX is expressed in heart, muscle, and thymus. PIX can act as a guanine nucleotide exchange factor for Rac1 and co-transfection of  $\beta$  PIX, Cdc42, and  $\alpha$  PAK results in increased  $\alpha$  PAK activity. PIX binding to PAK is required for localization of PAKs to focal complexes and injection of  $\beta$  PIX leads to Rac1-dependent membrane ruffling. Thus, PIX is important for PAK localization and activity during small GTPase-dependent regulation of cell morphology.

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**Keywords**

ARHGEF7; Rho guanine nucleotide exchange factor (GEF) 7; P50; P85; PAK3; PIXB; COOL1; P50BP; COOL-1; P85SPR; BETA-PIX; P85COOL1; Nbla10314; rho guanine nucleotide exchange factor 7; PAK-interacting exchange factor beta; guanine nucleotide exchange factor 7; SH3 domain-containing proline-rich protein;

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## GENE INFORMATION

**Entrez Gene ID**[8874](#)

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**UniProt ID**[Q14155](#)

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