

#4515 Store at -20°C

Cool1/βPix Antibody


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TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Hm Mk	Endogenous	81	Rabbit	#Q14155	8874

Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:100
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.	
Specificity / Sensitivity	Cool1/βPix Antibody detects endogenous levels of total cool1/βPix protein. The antibody does not cross-react with cool2/αPix.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues in the center of human cool1/βPix. Antibodies are purified by peptide affinity chromatography.	
Background	Cool/Pix proteins comprise a family of guanine nucleotide exchange factors (GEFs) localized to focal adhesions. The family consists of two isoforms, cool2/αpix and cool1/βPix, the latter having two splice variants that vary in their carboxy termini (1). Cool1/βPix, like other GEFs, has a DH (Dbl homology) domain, which allows binding of small GTPases and GDP/GTP exchange, and a PH (Pleckstrin homology) domain, which is important in regulating subcellular localization. Cool1/βPix also has an SH3 domain, which binds to the PAK kinase, a downstream effector of cdc42 and Rac (3,4). Phosphorylation of cool1/βPix by PAK2 downstream of MAPK signaling alters the localization of a complex containing PAK2 and cool-1/βPix, regulating formation of growth cones in response to growth factors (4). Growth factor induced activation of Rac1 via cool1/βPix was later shown to occur independently of subcellular localization (5). Endothelin-1 stimulation of mesangial cells stimulates the protein kinase A (PKA) pathway, resulting in translocation of cool-1/βPix and activation of cdc42 (6).	
Background References	1. Koh, C.G. et al. (2001) <i>J. Cell Sci.</i> 114, 4239-4251. 2. Manser, E. et al. (1998) <i>Mol. Cell</i> 1, 183-192. 3. Bagrodia, S. and Cerione, R.A. (1999) <i>Trends Cell Biol.</i> 9, 350-355. 4. Shin, E.Y. et al. (2002) <i>J. Biol. Chem.</i> 277, 44417-44430. 5. Shin, E.Y. et al. (2004) <i>J. Biol. Chem.</i> 279, 1994-2004. 6. Chahdi, A. et al. (2005) <i>J. Biol. Chem.</i> 280, 578-584.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected
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