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Store at -20C
#4515

Cool1/ β Pix Antibody

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

Applications: W, IP	Reactivity: H M R Hm Mk	Sensitivity: Endogenous	MW (kDa): 81	Source/Isotype: Rabbit	UniProt ID: #Q14155	Entrez-Gene Id: 8874
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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 μ g/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Cool1/ β Pix Antibody detects endogenous levels of total cool1/ β Pix protein. The antibody does not cross-react with cool2/ α Pix.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues in the center of human cool1/ β Pix. 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/ α Pix and cool1/ β Pix, the latter having two splice variants that vary in their carboxy termini (1). Cool1/ β Pix, 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/ β Pix also has an SH3 domain, which binds to the PAK kinase, a downstream effector of cdc42 and Rac (3,4). Phosphorylation of cool1/ β Pix by PAK2 downstream of MAPK signaling alters the localization of a complex containing PAK2 and cool-1/ β Pix, regulating formation of growth cones in response to growth factors (4). Growth factor induced activation of Rac1 via cool1/ β Pix 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/ β Pix and activation of cdc42 (6).

Background References

1. Koh, C.G. et al. (2001) *J. Cell Sci.* 114, 4239-4251.
2. Manser, E. et al. (1998) *Mol. Cell* 1, 183-192.
3. Bagrodia, S. and Cerione, R.A. (1999) *Trends Cell Biol.* 9, 350-355.
4. Shin, E.Y. et al. (2002) *J. Biol. Chem.* 277, 44417-44430.
5. Shin, E.Y. et al. (2004) *J. Biol. Chem.* 279, 1994-2004.
6. Chahdi, A. et al. (2005) *J. Biol. Chem.* 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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey

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