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## PTP-PEST (AG10) Mouse mAb


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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	110 to 125	Mouse IgG1	#Q05209	5782

<b>Product Usage Information</b>	<b>Application</b> Western Blotting Immunoprecipitation	<b>Dilution</b> 1:1000 1:50
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	PTP-PEST (AG10) Mouse mAb detects endogenous levels of total PTP-PEST protein. This antibody does not cross-react with other protein tyrosine phosphatases.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with human PTP-PEST recombinant protein. The antibody recognizes an epitope within the amino-terminal 305 residues.	
<b>Background</b>	<p>PTP-PEST is a ubiquitously expressed cytosolic protein tyrosine phosphatase with multiple proline-rich regions that appear to be the docking sites for PTP-PEST binding partners or substrates (1). PTP-PEST regulates fibroblast adhesion, migration, and cytokinesis through its association with and dephosphorylation of p130 Cas, paxillin, PSTPIP1, WASP, and other adhesion molecules (1-5). By modulating phosphorylation states of Shc, Pyk2, Fak, and WASP, PTP-PEST negatively regulates lymphocyte activation (1,6). In mammary epithelial cells, EGF facilitates the dephosphorylation of Jak2 by PTP-PEST, thereby interfering with lactogenic hormone PRL signaling (7). PTP-PEST dephosphorylates c-Abl as well, which affects the phosphorylation states of PTP-PEST substrates such as paxillin, p130 Cas, Crk, and PSTPIP1 (8).</p> <p>PTP-PEST regulates adhesion and motility of cultured epithelial cells through modulation of Rho GTPase activity (9), and is required for integrin-mediated endothelial cell adhesion and migration (10).</p>	
<b>Background References</b>	1. Davidson, D. and Veillette, A. (2001) <i>EMBO J</i> 20, 3414-26. 2. Garton, A.J. and Tonks, N.K. (1999) <i>J Biol Chem</i> 274, 3811-8. 3. Shen, Y. et al. (2000) <i>J Biol Chem</i> 275, 1405-13. 4. Angers-Loustau, A. et al. (1999) <i>J Cell Biol</i> 144, 1019-31. 5. Côté, J.F. et al. (2002) <i>J Biol Chem</i> 277, 2973-86. 6. Badour, K. et al. (2004) <i>J Exp Med</i> 199, 99-112. 7. Horsch, K. et al. (2001) <i>Mol Endocrinol</i> 15, 2182-96. 8. Cong, F. et al. (2000) <i>Mol Cell</i> 6, 1413-23. 9. Espejo, R. et al. (2010) <i>Am J Physiol Cell Physiol</i> 299, C454-63. 10. Souza, C.M. et al. (2012) <i>J Biol Chem</i> 287, 43180-90.	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>WB:</b> Western Blotting <b>IP:</b> Immunoprecipitation
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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