

Pan-Calcineurin A Antibody



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

Applications: W, IP, IF-IC, FC-FP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 59	Source/Isotype: Rabbit	UniProt ID: #P16298, #Q08209, #P48454	Entrez-Gene Id: 5532, 5530, 5533
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Product Usage Information	Application Western Blotting Immunoprecipitation Immunofluorescence (Immunocytochemistry) Flow Cytometry (Fixed/Permeabilized)	Dilution 1:1000 1:50 1:50 1:25
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	This antibody detects endogenous levels of Calcineurin A (alpha isoform). It may also recognize the beta and gamma isoforms of Calcineurin A. The antibody does not cross-react with protein phosphatase 1 or 2A.	
Species predicted to react based on 100% sequence homology	Chicken, Xenopus, Bovine, Pig	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminus of human Calcineurin A (alpha isoform). Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Calcineurin, also known as protein phosphatase 2B (PP2B), is a calmodulin-dependent, calcium-activated, serine/threonine protein phosphatase composed of a catalytic subunit (calcineurin A) and a tightly bound regulatory subunit (calcineurin B) (1). Calcineurin A is highly homologous to protein phosphatases 1 and 2A. Calcineurin B, like calmodulin, contains four EF-hand, calcium-binding motifs. Calcineurin signaling has been implicated in a broad spectrum of cellular processes including cell-cycle regulation, stress response and apoptosis and is required for proper cardiovascular and skeletal muscle development (2,3). Calcineurin-mediated dephosphorylation of the nuclear factor of activated T cells (NFAT) transcription factor is essential for NFAT activation and nuclear translocation and early gene expression in T lymphocytes (2,3). Calcineurin is the target of the immunosuppressive drugs Cyclosporin A and FK506, both of which block the activation of quiescent T cells after T cell receptor engagement (2,3). Cyclosporin A and FK506 bind to the immunophilins, cyclophilin and FKBP respectively and the immunophilin-drug complex binds to calcineurin and blocks substrate binding.	
Background References	<ol style="list-style-type: none"> Rusnak, F. and Mertz, P. (2000) <i>Physiol. Rev.</i> 80, 1483-521. Kahl, C.R. and Means, A.R. (2003) <i>Endocr. Rev.</i> 24, 719-36. Schulz, R.A. and Yutzey, K.E. (2004) <i>Dev. Biol.</i> 266, 1-16. 	
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 IF-IC: Immunofluorescence (Immunocytochemistry) FC-FP: Flow Cytometry (Fixed/Permeabilized)	
Cross-Reactivity Key	H: Human M: Mouse R: Rat Mk: Monkey	
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