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#4146

Calpastatin Antibody

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

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 120	Source/Isotype: Rabbit	UniProt ID: #P20810	Entrez-Gene Id: 831
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Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
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	Calpastatin Antibody detects endogenous levels of total calpastatin protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to human calpastatin. Antibodies are purified by peptide affinity chromatography.	
Background	Calpain is a thiol proteinase that is functionally active as a heterodimer composed of a small regulatory subunit and one of at least two large catalytic subunits (calpain 1 or calpain 2). <i>In vitro</i> , calpain 1 (mu-calpain) requires micromolar levels of calcium, while calpain 2 (M-calpain) requires millimolar levels of calcium for activation (1). Calpastatin negatively regulates autoproteolytic cleavage of calpain 1 between Gly27 and Leu28 in a calcium dependent manner (2). In particular, calpastatin binds and inhibits calpain when calcium levels are high and is released when calcium levels go down. Calpastatin contains five domains, a unique N-terminal domain L with no inhibitory effects and four homologous domains (CAST 1-4) that can inhibit heterodimeric calpain 1 and 2 (3).	
Background References	<ol style="list-style-type: none"> Perrin, B.J. and Huttenlocher, A. (2002) <i>Int J Biochem Cell Biol</i> 34, 722-5. Melloni, E. et al. (1996) <i>Biochem Biophys Res Commun</i> 229, 193-7. Hanna, R.A. et al. (2007) <i>FEBS Lett</i> 581, 2894-8. 	
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	
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