

#4146 Store at -20°C

# Calpastatin Antibody



✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
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rev. 06/23/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #831  
Swiss-Prot Acc. #P20810

Applications W, IP Endogenous	Species Cross-Reactivity* H, M, R	Molecular Wt. 120 kDa	Source Rabbit**
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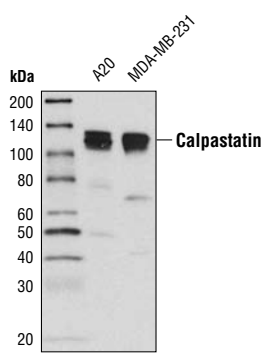
**Background:** Calpain is a thiol proteinase that is functionally active as a heterodimer composed of a small regulatory subunit and one of at least two large catalytic subunits (calpain 1 or calpain 2). *In vitro*, calpain 1 (mu-calpain) requires micromolar levels of calcium, while calpain 2 (M-calpain) 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).

**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 References:**

- (1) Perrin, B.J. and Huttenlocher, A. (2002) *Int J Biochem Cell Biol* 34, 722–5.
- (2) Melloni, E. et al. (1996) *Biochem Biophys Res Commun* 229, 193–7.
- (3) Hanna, R.A. et al. (2007) *FEBS Lett* 581, 2894–8.



Western blot analysis of extracts from A20 and MDA-MB-231 cells using Calpastatin Antibody.

**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.

\*Species cross-reactivity is determined by Western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western Blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.