

**Anti-Calpain 1 Antibody**  
Catalog # ABO10688**Specification****Anti-Calpain 1 Antibody - Product Information**

Application	WB, IHC, ICC
Primary Accession	<a href="#">P07384</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Calpain-1 catalytic subunit(CAPN1) detection. Tested with WB, IHC-P, IHC-F, ICC in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Calpain 1 Antibody - Additional Information**

**Gene ID** 823

**Other Names**

Calpain-1 catalytic subunit, 3.4.22.52, Calcium-activated neutral proteinase 1, CANP 1, Calpain mu-type, Calpain-1 large subunit, Cell proliferation-inducing gene 30 protein, Micromolar-calpain, muCANP, CAPN1, CANPL1

**Calculated MW**

81890 MW KDa

**Application Details**

Immunocytochemistry , 0.5-1 µg/ml, Human, -<br>Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Rat, Human, Mouse<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Cytoplasm . Cell membrane . Translocates to the plasma membrane upon Ca(2+) binding. In granular keratinocytes and in lower corneocytes, colocalizes with FLG and FLG2 (PubMed:21531719). .

**Tissue Specificity**

Ubiquitous.

**Protein Name**

Calpain-1 catalytic subunit

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human Calpain 1(312-326aa EWNNVDPYERDQLRV), different from the mouse sequence by two amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Sequence Similarities**

Belongs to the peptidase C2 family.

**Anti-Calpain 1 Antibody - Protein Information**

**Name** CAPN1 ([HGNC:1476](#))

**Synonyms** CANPL1

**Function**

Calcium-regulated non-lysosomal thiol-protease which catalyzes limited proteolysis of substrates involved in cytoskeletal remodeling and signal transduction (PubMed:[19617626](http://www.uniprot.org/citations/19617626), PubMed:[21531719](http://www.uniprot.org/citations/21531719), PubMed:[2400579](http://www.uniprot.org/citations/2400579)). Proteolytically cleaves CTBP1 at 'Asn-375', 'Gly-387' and 'His-409' (PubMed:[23707407](http://www.uniprot.org/citations/23707407)). Cleaves and activates caspase-7 (CASP7) (PubMed:[19617626](http://www.uniprot.org/citations/19617626)).

**Cellular Location**

Cytoplasm. Cell membrane. Note=Translocates to the plasma membrane upon Ca(2+) binding. In granular keratinocytes and in lower corneocytes, colocalizes with FLG and FLG2 (PubMed:21531719)

**Tissue Location**

Ubiquitous.

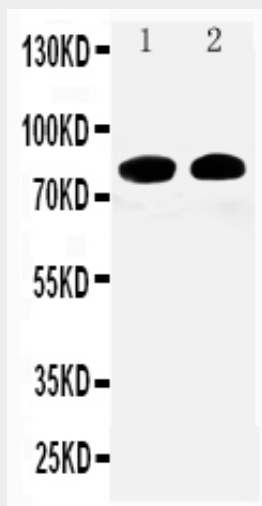
**Anti-Calpain 1 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

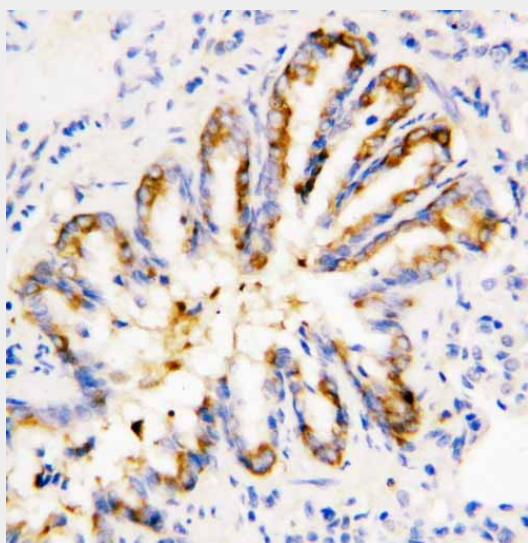
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

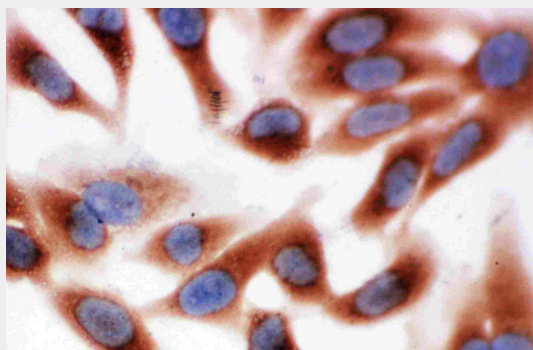
### Anti-Calpain 1 Antibody - Images



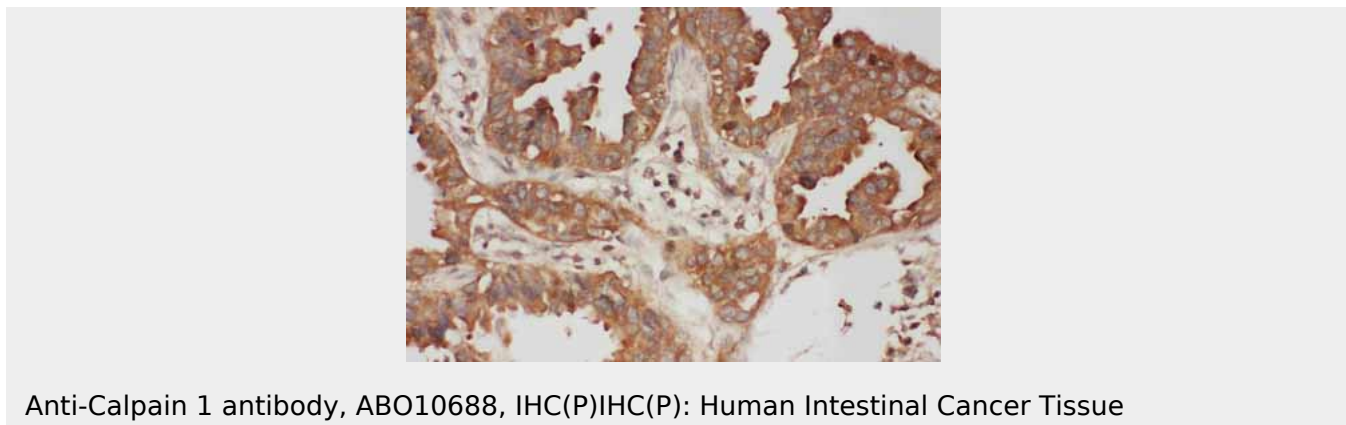
Anti-Calpain 1 antibody, ABO10688, Western blotting Lane 1: HT1080 Cell Lysate Lane 2: COLO320 Cell Lysate



Anti-Calpain 1 antibody, ABO10688, IHC(P) IHC(P): Rat Lung Tissue



Anti-Calpain 1 antibody, ABO10688, ICC ICC: HELA Cell



### **Anti-Calpain 1 Antibody - Background**

Calpain-1 catalytic subunit is a protein that in humans is encoded by the CAPN1 gene. Calpain is an intracellular protease that requires calcium for its catalytic activity. Two isozymes, calpain I( $\mu$ -calpain) and calpain II( $m$ -calpain), with different calcium requirements, have been identified. Both are heterodimers composed of L(large, catalytic, 80 kD) and S(small, regulatory, 30 kD) subunits. The isozymes share an identical S subunit, with the differences arising from the L subunits, L1(CAPN1) and L2. By quantitative RT-PCR, Ueyama et al.(1998) found that expression of calpain-1 and calpain-2 mRNA was significantly increased in muscle biopsy samples derived from 5 men with progressive muscular dystrophy(e.g., DMD; 310200) and 2 men and 3 women with amyotrophic lateral sclerosis(ALS; 105400) compared with controls. Using cDNA clones as probes, Ohno et al.(1989, 1990) assign CANPL1 to chromosome 11.