

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

Application	WB, IHC, ICC
Primary Accession	P07384
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, -
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Rat, Human, Mouse
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

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 Na₂HPO₄, 0.05mg Thimerosal, 0.05mg NaN₃.

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.

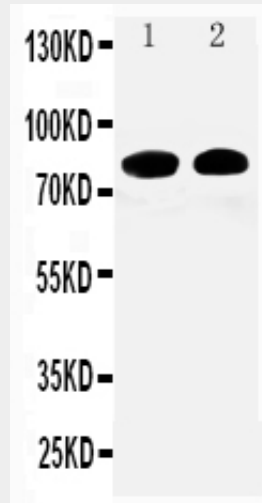
Anti-Calpain 1 Antibody - Protocols

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

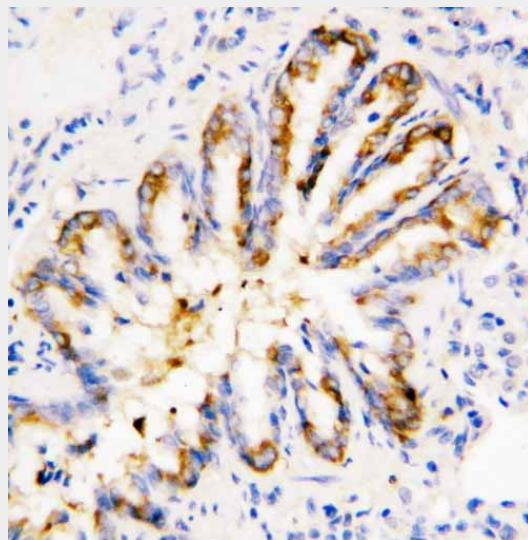
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

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

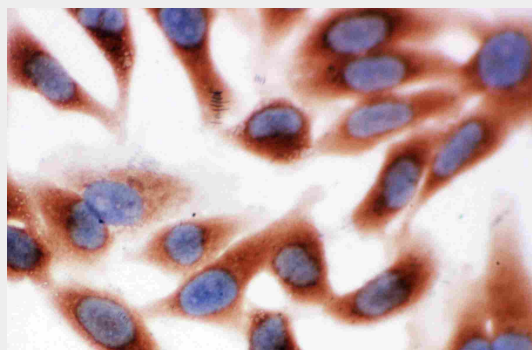
Anti-Calpain 1 Antibody - Images



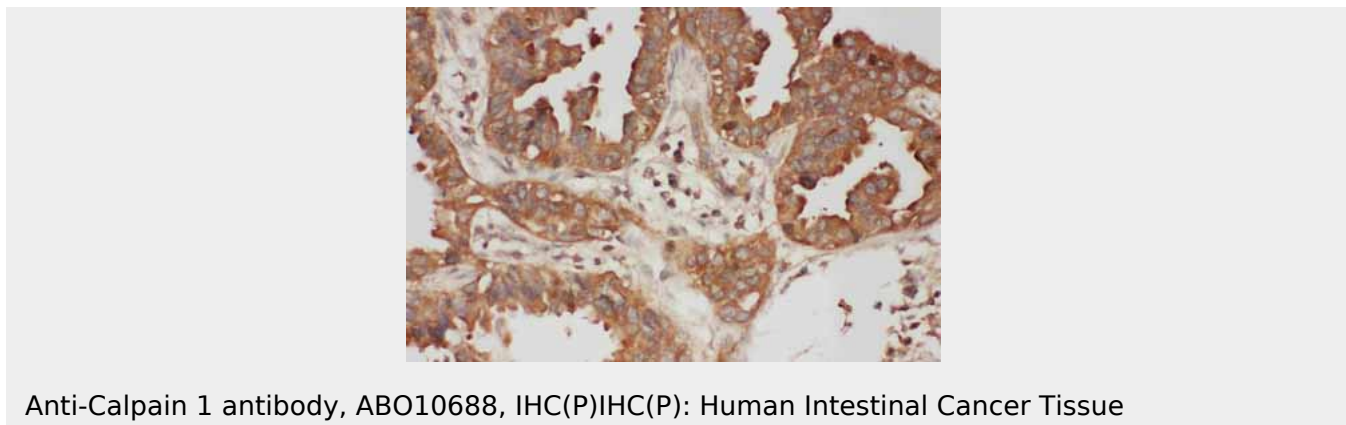
Anti-Calpain 1 antibody, ABO10688, Western blotting Lane 1: HT1080 Cell Lysate Lane 2: COLO320 Cell Lysate



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(μ -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.