10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Calpain 1 Antibody
Catalog # ABO10688

Specification

Anti-Calpain 1 Antibody - Product Information

Application	**WB, IHC-P, IHC-F, 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 r˚Constitution, 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, PubMed:21531719, PubMed:2400579). Proteolytically cleaves CTBP1 at 'Asn-375', 'Gly-387' and 'His-409' (PubMed:23707407). Cleaves and activates caspase-7 (CASP7) (PubMed: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

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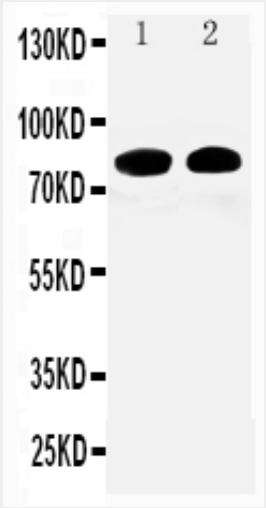
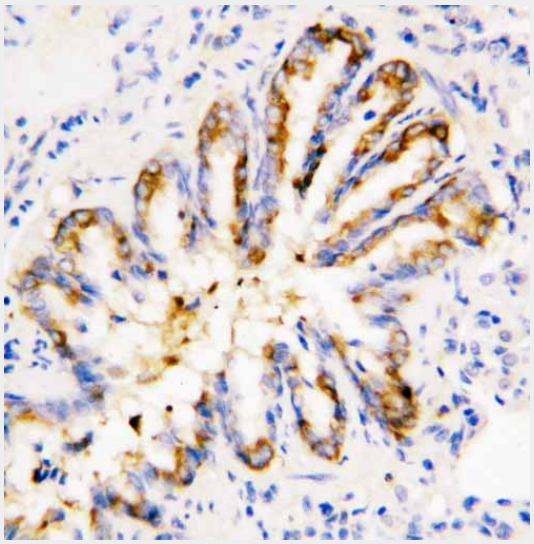
- Flow Cytomety
- Cell Culture

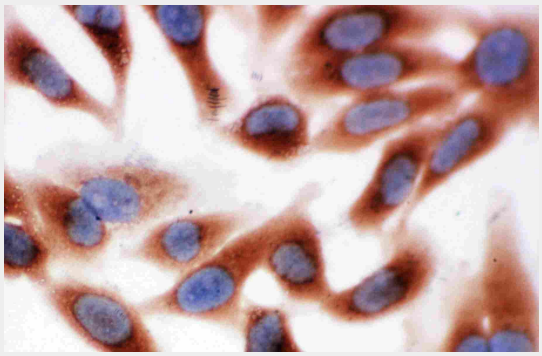
Anti-Calpain 1 Antibody - Images



Anti-Calpain 1 antibody, ABO10688, Western blottingLane 1: HT1080 Cell LysateLane 2: COLO320 Cell Lysate



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



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

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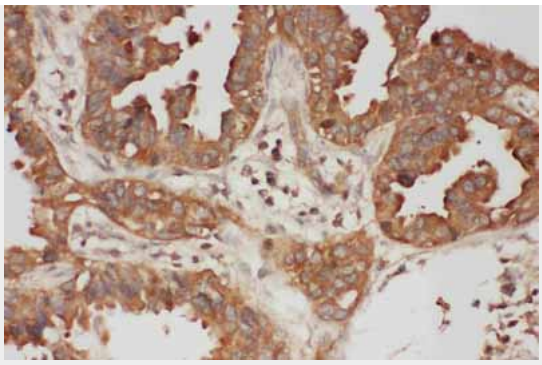

Anti-Calpain 1 antibody, ABO10688, IHC(P)IHC(P): Human Intestinal Cancer Tissue

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.