

Mouse anti-Human Calpain 1 Monoclonal Antibody | anti-CAPN1 antibody

Anti-Calpain 1 Antibody (monoclonal, 2I10)

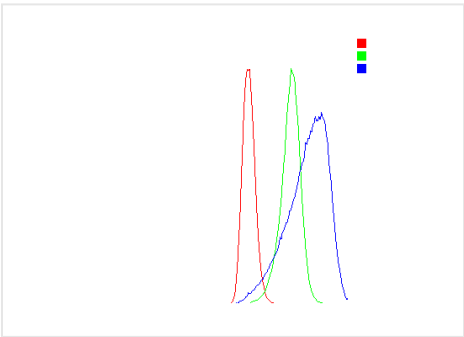
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125919	Mouse	Human	Flow Cytometry, Functional Assay, Immunofluorescence, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

Calpain 1; Monoclonal Antibody; Anti-Calpain 1 Antibody (monoclonal; 2I10); CAPN1; CANPL1; PIG30; Calpain-1 catalytic subunit; EC 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; calpain 1; (mu/I) large subunit; anti-CAPN1 antibody

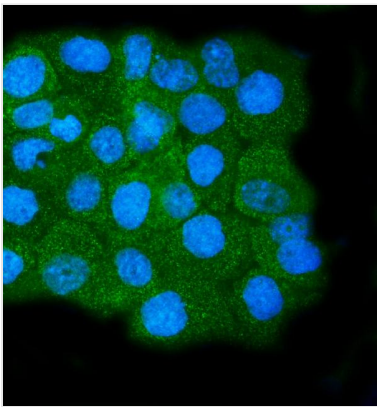
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG2a
Clone Number	2I10
Specificity	Mouse IgG monoclonal antibody for Calpain 1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Applicable Applications for anti-CAPN1 antibody	FCM/FACS (Flow Cytometry), IF (Immunofluorescence), ICC (Immunocytochemistry), WB (Western Blot)
Immunogen	E Coli-derived human Calpain 1 recombinant protein (Position: Q396-A555). Human Calpain 1 shares 86% amino acid (aa) sequence identity with both mouse and rat Calpain 1.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



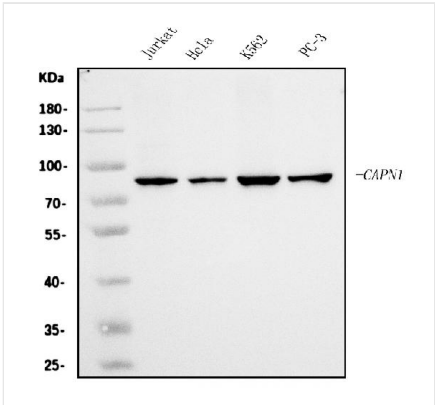
FCM/FACS (Flow Cytometry)

Figure 3. Flow Cytometry analysis of A549 cells using anti-Calpain 1 antibody (AAA125919).Overlay histogram showing A549 cells stained with AAA125919 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Calpain 1 Antibody (AAA125919, 1μg/1x10⁶ cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10μg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1μg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IF (Immunofluorescence)

Figure 2. IF analysis of Calpain 1 using anti- Calpain 1 antibody (AAA125919).Calpain 1 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL mouse anti- Calpain 1 Antibody (AAA125919) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



WB (Western Blot)

Figure 1. Western blot analysis of Calpain 1 using anti-Calpain 1 antibody (AAA125919).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions.Lane 1: human Jurkat whole cell lysatesLane 2: human Hela whole cell lysatesLane 3: human K562 whole cell lysatesLane 4: human PC-3 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with mouse anti- Calpain 1 antigen affinity purified monoclonal antibody (Catalog # AAA125919) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Calpain 1 at approximately 82KD. The expected band size for Calpain 1 is at 82KD.

ADDITIONAL INFORMATION

Related Product Information for anti-CAPN1 antibody

CAPN1 is also known as CANP or muCL. The calpains, calcium-activated neutral proteases, are nonlysosomal, intracellular cysteine proteases. The mammalian calpains include ubiquitous, stomach-specific, and muscle-specific proteins. The ubiquitous enzymes consist of heterodimers with distinct large, catalytic subunits associated with a common small, regulatory subunit. This gene encodes the large subunit of the ubiquitous enzyme, calpain 1. Several transcript variants encoding two different isoforms have been found for this gene.

References	1. Smith IJ, et al. Calpain activity is increased in skeletal muscle from gastric cancer patients with no or minimal weight loss. Muscle Nerve, 2011 Mar. 2. Wang JC, et al. Proteolysis by endogenous calpain I leads to the activation of calcineurin in human heart. Clin Lab, 2012.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	119594774
NCBI GeneID	823
UniProt Accession #	P07384; Q2TTR0; Q6DHV4
Molecular Weight	81,890 Da
NCBI Official Full Name	calpain 1, (mu/I) large subunit, isoform CRA_c
NCBI Official Synonym Full Names	calpain 1, (mu/I) large subunit
NCBI Official Symbol	CAPN1
NCBI Official Synonym Symbols	CANP; muCL; CANP1; CANPL1; muCANP
NCBI Protein Information	calpain-1 catalytic subunit; CANP 1; calpain mu-type; micromolar-calpain; calpain-1 large subunit; calpain, large polypeptide L1; calcium-activated neutral proteinase 1; cell proliferation-inducing protein 30; cell proliferation-inducing gene 30 protein
UniProt Protein Name	Calpain-1 catalytic subunit
UniProt Gene Name	CAPN1
UniProt Synonym Gene Names	CANPL1; CANP 1; muCANP
UniProt Entry Name	CAN1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.