BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-Calpain 1 Antibody Picoband® (monoclonal, 2E3)

Catalog Number: M01943-4

About CAPN1

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.

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Overview

Product Name	Anti-Calpain 1 Antibody Picoband® (monoclonal, 2E3)
Reactive Species	Human
Description	Boster Bio Anti-Calpain 1 Antibody Picoband® (monoclonal, 2E3) catalog # M01943-4. Tested in Flow Cytometry, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, WB
Clonality	Monoclonal 2E3
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P07384

Technical Details

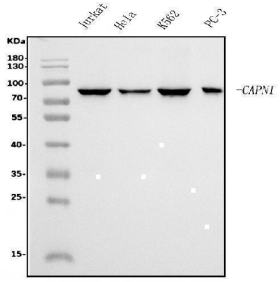
Immunogen	E.coli-derived human Calpain 1 recombinant protein (Position: Q396-A555). Human Calpain 1 shares 86% amino acid (aa) sequence identity with both mouse and rat Calpain 1.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western

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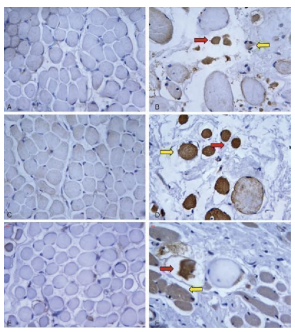
	blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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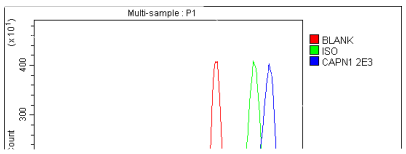
Anti-Calpain 1 Antibody Picoband® (monoclonal, 2E3) (M01943-4) Images



Western blot analysis of Calpain 1 using anti-Calpain 1 antibody (M01943-4). 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 lysates, Lane 2: human Hela whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 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 # M01943-4) at 0.5 ug/mL overnight at 4°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 (Catalog # EK1001) 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.



The sections obtained from muscles of controls (13 months' old) and 2-year-old patients with CMT. Immunostaining for (A) calpain-1, (C) cubiquitin, and (E) 20S proteasome were very weak in the muscle cytoplasm of the control. But, in the CMT specimen, atrophic muscle fibers showed moderate (yellow arrow) or strong (red arrow) immunoreactions for (B) calpain-1, (D) ubiquitin, and (F) 20S proteasome (×400 original magnification).Index in PubMed under a CC BY license. PMID: 25415668



Flow Cytometry analysis of A549 cells using anti-Calpain 1 antibody (M01943-4). Overlay histogram showing A549 cells stained with M01943-4 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with mouse anti-Calpain 1 Antibody (M01943-4, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

2 Publications Citing This Product

1. PubMed ID: 10.1016/j.cyto.2017.04.007, Determination of cytokine levels in multiple sclerosis patients and their relevance with patients response to Cinnovex

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2. PubMed ID: 25415668, Chen Hx, Tang Sp, Gao Ft, Xu Jl, Jiang Xp, Cao J, Fu Gb, Sun K, Liu Sz, Shi W. Medicine (Baltimore). 2014 Nov;93(23):E138. Doi: 10.1097/Md.0000000000000138. Fibrosis, Adipogenesis, And Muscle Atrophy In Congenital Muscular Torticollis.

Visit bosterbio.com/anti-calpain-1-picoband-trade-antibody-m01943-4-boster.html to see all 2 publications.

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