Product datasheet

Anti-Calpain 1/CAPN1 Antibody

Catalog Number: *BA0679*

BOSTER
antibody and ELISA experts
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Basic Information

Product Name	Anti-Calpain 1/CAPN1 Antibody
Gene Name	CAPN1
Source	Rabbit
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, IHC, IHC-F, ICC/IF
Contents	500 ug/ml antibody with PBS， 0.02% NaN3 , 1 mg BSA and 50% glycerol.
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.
concentration	500 ug/ml
Purification	Immunogen affinity purified.
Observed MW	82KD
Dilution Ratios	Western blot(WB): 1:500-2000 Immunohistochemistry in paraffin section (IHC): 1:50-400 Immunohistochemistry in frozen section (IHC-F): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied. 6 months 2 to 8℃ after reconstitution. Avoid repeated freezing and thawing.

Background Information

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.

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Reference

Anti-Calpain 1/CAPN1 Antibody被引用在2文献中。

Selected Validation Data

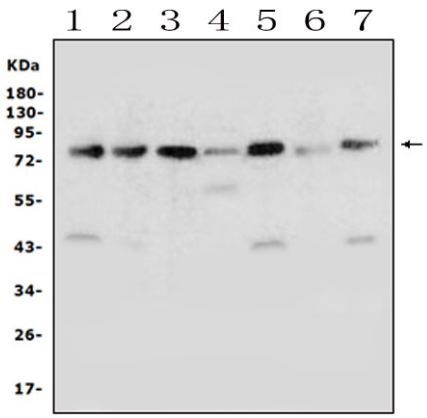

Figure 1. Western blot analysis of Calpain 1 using anti-Calpain 1 antibody (BA0679).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: mouse spleen tissue lysates,
Lane 2: mouse lung tissue lysates,
Lane 3: mouse kidney tissue lysates,
Lane 4: mouse brain tissue lysates,
Lane 5: mouse thymus tissue lysates,
Lane 6: mouse small intestine tissue lysates,
Lane 7: mouse ovary tissue 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 rabbit anti-Calpain 1 antigen affinity purified polyclonal antibody (Catalog # BA0679) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit 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 # EK1002) with Tanon 5200 system. A specific band was detected for Calpain 1 at approximately 82KD. The expected band size for Calpain 1 is at 80KD.

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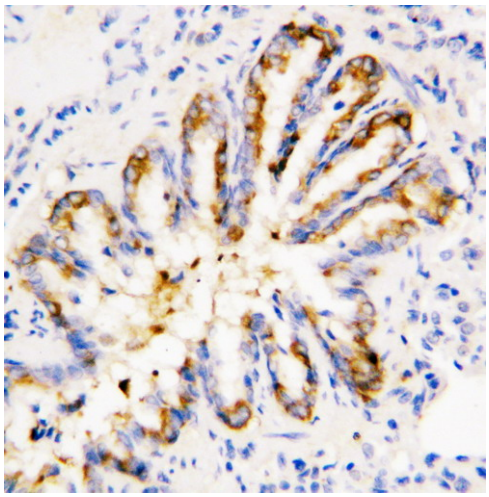

Figure 2. IHC analysis of Calpain 1 using anti-Calpain 1 antibody (BA0679).
Calpain 1 was detected in paraffin-embedded section of rat lung tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1µg/ml rabbit anti-Calpain 1 Antibody (BA0679) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

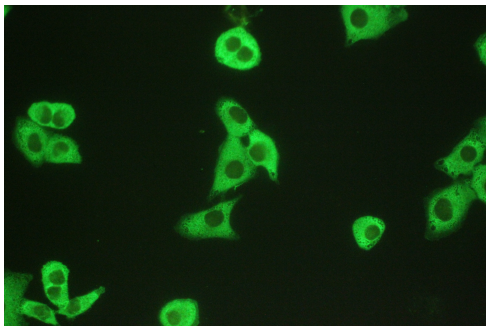

Figure 7.ICC analysis using anti- Calpain 1 antibody (BA0679). was detected in immersion fixed A549 cell line . Cells were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green)(Catalog#BA1127) and counterstained with DAPI (blue).