

Anti-Calpain 1 Antibody [PSH24-37]

HA724444



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Green monkey
Applications:	WB
Molecular Wt:	Predicted band size: 82 kDa
Clone number:	PSH24-37

Description: Calpain 1 (large subunit), also designated μ -calpain, is an intracellular calcium-dependent protease that cleaves cyto-skeletal and submembranous proteins. Calpains are nonlysosomal, calcium-activated intracellular cysteine proteases. Calpains mediate specific Ca^{2+} -dependent processes including cell fusion, mitosis and meiosis. Calpains are heterodimers of a small regulatory subunit and one of three large catalytic subunits, designated Calpain 1 (large subunit), Calpain 2 and Calpain p94. Calpastatin regulates Calpain by inhibiting both the proteolytic activity of Calpain and its binding to membranes. Calpastatin exists in two types, tissue type and erythrocyte type, resulting from both alternative splicing and proteolytic processing. Calpain-1 co-localizes with human leukocyte antigen-DR (HLA-DR) on activated microglia in the aging brain. Calpain influences the process of spermatogenesis and the events preceding fertilization, such as the acrosome reaction.

Immunogen: Synthetic peptide within human Calpain 1 aa 551-600.

Positive control: A431 (Human epidermoid carcinoma skin squamous cell) cell lysate, MDA-MB-231 (Human breast cancer cell) cell lysate, MCF7 (Human breast cancer cell) cell lysate, HeLa (Human cervical adenocarcinoma cell) cell lysate, Jurkat (Human T-lymphoblastic cells) cell lysate, NIH/3T3 (Mouse fibroblast) cell lysate, C6 (Rat glioma cell) cell lysate, COS-1 (African green monkey kidney fibroblast) cell lysate.

Subcellular location: Cytoplasm, Cell membrane.

Database links: SwissProt: P07384 Human | O35350 Mouse | P97571 Rat

Recommended Dilutions:

WB 1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

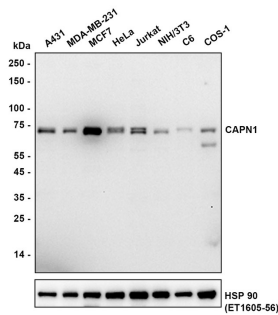
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Western blot analysis of Calpain 1 on different lysates with Rabbit anti-Calpain 1 antibody (HA724444) at 1/1,000 dilution.

Lane 1: A431 (Human epidermoid carcinoma skin squamous cell) cell lysate
Lane 2: MDA-MB-231 (Human breast cancer cell) cell lysate
Lane 3: MCF7 (Human breast cancer cell) cell lysate
Lane 4: HeLa (Human cervical adenocarcinoma cell) cell lysate
Lane 5: Jurkat (Human T-lymphoblastic cells) cell lysate
Lane 6: NIH/3T3 (Mouse fibroblast) cell lysate
Lane 7: C6 (Rat glioma cell) cell lysate
Lane 8: COS-1 (African green monkey kidney fibroblast) cell lysate



Lysates/proteins at 30 µg/Lane.
Exposure time: 3 minutes; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature
Primary antibody: HA724444, 1/1,000 in primary antibody dilution buffer (K1803), overnight at 4 °C
Secondary antibody: Goat anti-Rabbit IgG-HRP (HA1001), 1/50,000 in 5% NFDM/TBST, 1 hour at room temperature

Predicted band size: 82 kDa
Observed band size: 70 kDa

Note: All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

Background References

1. Liu X et al. Mitochondrial calpain-1 activates NLRP3 inflammasome by cleaving ATP5A1 and inducing mitochondrial ROS in CVB3-induced myocarditis. Basic Res Cardiol. 2022 Aug
2. Wei S et al. Calpain-1 Up-Regulation Promotes Bleomycin-Induced Pulmonary Fibrosis by Activating Ferroptosis. Am J Pathol. 2024 Dec

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