

Anti-Calpain 1 Antibody [2A2]

EM1801-03



Product Type:	Mouse monoclonal IgM, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 82 kDa
Clone number:	2A2

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: Recombinant protein within Human Calpain 1 aa 1-714 / 714.

Positive control: Rat testis tissue, human spleen tissue, human colon cancer tissue, human kidney tissue, mouse fallopian tubes tissue, A431, SiHa.

Subcellular location: Cell membrane, Cytoplasm, Membrane.

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

Recommended Dilutions:

IF-Cell	1:50-1:200
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein L affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

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Images



Fig1: ICC staining Calpain 1(green) in SiHa cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

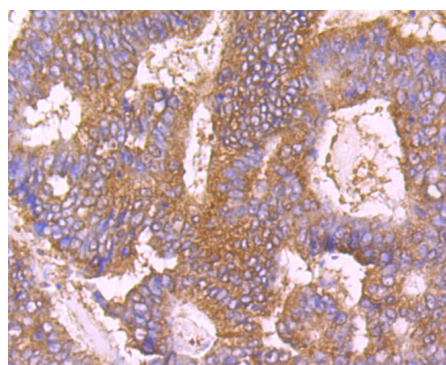


Fig2: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue using anti-Calpain 1 antibody. Counter stained with hematoxylin.

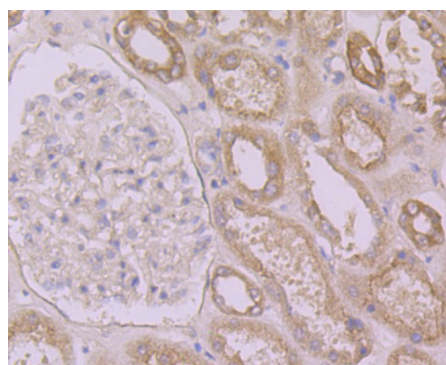


Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-Calpain 1 antibody. Counter stained with hematoxylin.

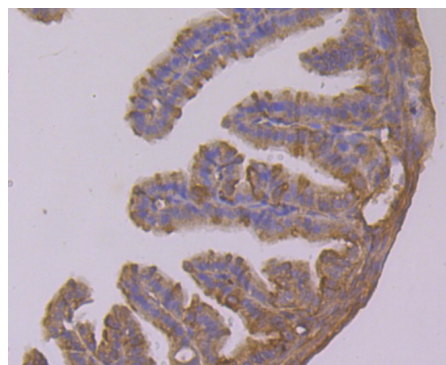


Fig4: Immunohistochemical analysis of paraffin-embedded mouse fallopian tubes tissue using anti-Calpain 1 antibody. Counter stained with hematoxylin.

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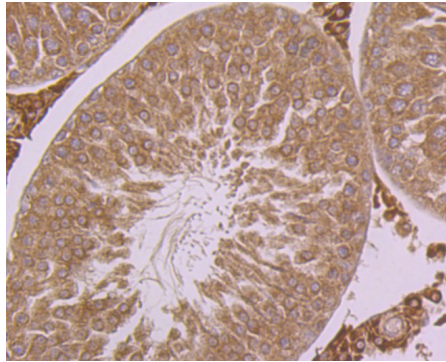


Fig5: Immunohistochemical analysis of paraffin-embedded rat testis tissue using anti-Calpain 1 antibody. Counter stained with hematoxylin.

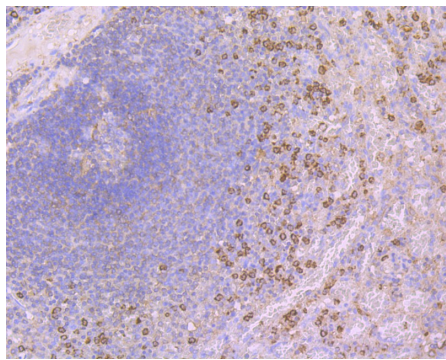


Fig6: Immunohistochemical analysis of paraffin-embedded human spleen tissue using anti-Calpain 1 antibody. Counter stained with hematoxylin.

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

Background References

1. Sorimachi H et al. A novel member of the calcium-dependent cysteine protease family. *Biol Chem Hoppe-Seyler* 371:171-176 (1990).
2. Hsu C Y et al. Deimination of human filaggrin-2 promotes its proteolysis by Calpain 1 (large subunit). *J Biol Chem* 286:23222-23233 (2011).

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