

Basic Information

Product Name	Anti-Calpain 2/CAPN2 Antibody (Clone#8I6)	
Gene Name	CAPN2	
Source	Mouse	
Clonality	Monoclonal	
Isotype	IgG2a	
Species Reactivity	human, mouse, monkey	
Tested Application	WB, IHC, ICC/IF, FCM	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	E. coli-derived human Calpain 2 recombinant protein (Position: R500-L700). Human Calpain 2 shares 93.5% and 92.5% amino acid (aa) sequence identity with mouse and rat Calpain 2, respectively.	
Concentration	500 ug/ml	
Purification	protein G purified.	
Observed MW	80 kDa	
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (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.	

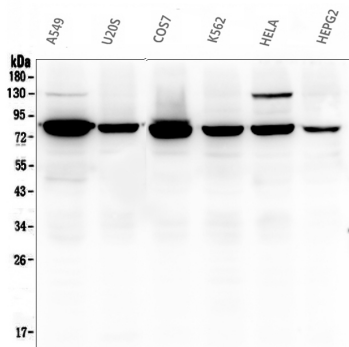
Storage

12 months from date of receipt, -20°C as supplied.

Background Information

Calpain-2 catalytic subunit is a protein that in humans is encoded by the CAPN2 gene. 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 2. Multiple heterogeneous transcriptional start sites in the 5' UTR have been reported.

Selected Validation Data



Western blot analysis of anti-Calpain 2/CAPN2 antibody (M03492). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human A549 whole cell lysates,

Lane 2: human U2OS whole cell lysates,

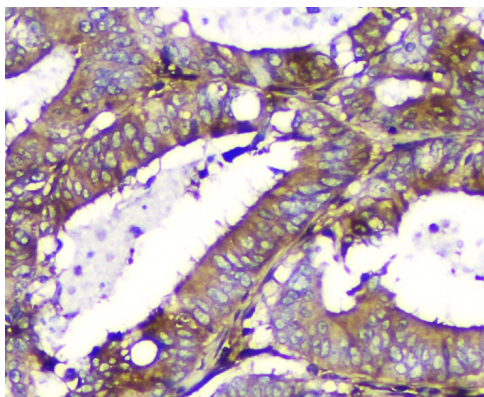
Lane 3: monkey COS-7 whole cell lysates,

Lane 4: human K562 whole cell lysates,

Lane 5: human Hela whole cell lysates,

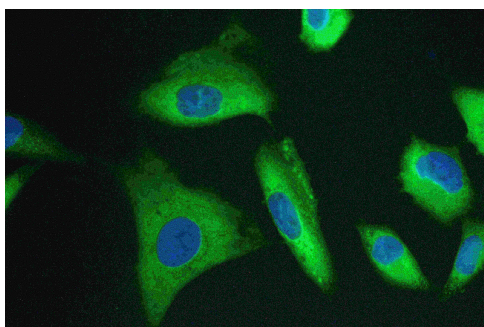
Lane 6: human HepG2 whole cell lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-Calpain 2/CAPN2 antigen affinity purified monoclonal antibody (M03492) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for Calpain 2/CAPN2 at approximately 80 kDa. The expected band size for Calpain 2/CAPN2 is at 80 kDa.



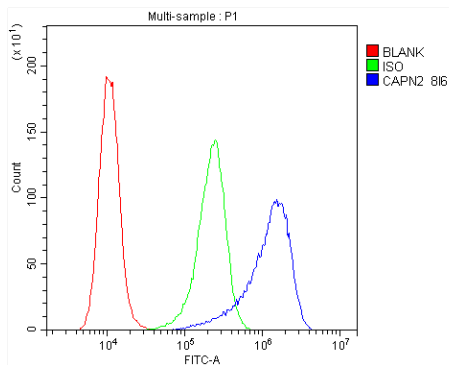
IHC analysis of Calpain 2/CAPN2 using anti-Calpain 2/CAPN2 antibody (M03492).

Calpain 2/CAPN2 was detected in a paraffin-embedded section of human intestinal cancer tissue. The tissue section was incubated with mouse anti-Calpain 2/CAPN2 Antibody (M03492) at a dilution of 1:200 and developed using HRP Conjugated mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB (Catalog # AR1027) as the chromogen.



IF analysis of Calpain 2/CAPN2 using anti-Calpain 2/CAPN2 antibody (M03492).

Calpain 2/CAPN2 was detected in an immunocytochemical section of A549 cells. The section was incubated with mouse anti-Calpain 2/CAPN2 Antibody (M03492) at a dilution of 1:100. Dylight488-conjugated Anti-mouse IgG Secondary Antibody (green)(Catalog#BA1126) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of A431 cells using anti-Calpain 2/CAPN2 antibody (M03492).

Overlay histogram showing A431 cells stained with M03492 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Calpain 2/CAPN2 Antibody (M03492) at 1:100 dilution for 30 min at 20°C.

DyLight®488 conjugated goat anti-mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.