

Calpain 2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP56055

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O08529
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	79872
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Calpain 2
Epitope Specificity	301-400/700
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Cell membrane. Note=Translocates to the plasma membrane upon Ca(2+) binding.
SIMILARITY	Belongs to the peptidase C2 family.Contains 1 calpain catalytic domain.Contains 2 EF-hand domains.
SUBUNIT	Forms a heterodimer with a small (regulatory) subunit (CAPNS1).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Calpain, and m calpain, also known as Calpain 2, are intracellular, calcium dependent cysteine proteases. Mu calpain has a micromolar sensitivity (thus the mu) as compared to the millimolar calcium sensitivity of m calpain. Both Calpains 1 and 2 are composed of an 80 kD subunit and a 30 kD subunit. Whereas the 30 kDa subunit is shared by both enzymes, the larger catalytic subunits are different and exhibit the distinct Ca++ requirements that are suggested by their names. The calpains have papain like activity, thus the pain nomenclature. Both Calpain 1 and Calpain 2 are ubiquitously expressed, and are countered by the endogenous calpain inhibitor, calpastatin. Other calpain family members (calpain 94, ncl2, ncl3, etc) have more limited tissue distribution, and perhaps different functions. The calpain family members consist of a common small subunit (Calpain 4), and a large variable subunit. It is not clear that all calpains contain a small subunit. Domains in the large subunit include the amino terminal domain I, the proteinase domain II, domain III, and the EF hand domain IV. The calpains appear to serve multiple physiological roles, and ideas concerning the functions of these enzymes are in a state of rapid flux.

Additional Information

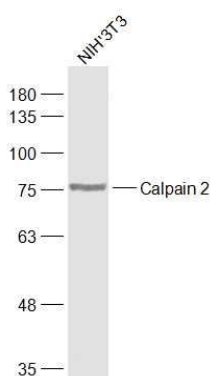
Gene ID 12334

Other Names	Calpain-2 catalytic subunit, 3.4.22.53, 80 kDa M-calpain subunit, CALP80, Calcium-activated neutral proteinase 2, CANP 2, Calpain M-type, Calpain-2 large subunit, Millimolar-calpain, M-calpain, Capn2
Target/Specificity	Ubiquitous.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Capn2
Function	Calcium-regulated non-lysosomal thiol-protease which catalyzes limited proteolysis of substrates involved in cytoskeletal remodeling and signal transduction. Proteolytically cleaves MYOC at 'Arg-226' (By similarity). Proteolytically cleaves CPEB3 following neuronal stimulation which abolishes CPEB3 translational repressor activity, leading to translation of CPEB3 target mRNAs (PubMed: 22711986).
Cellular Location	Cytoplasm. Cell membrane. Note=Translocates to the plasma membrane upon Ca(2+) binding.
Tissue Location	Ubiquitous.

Images

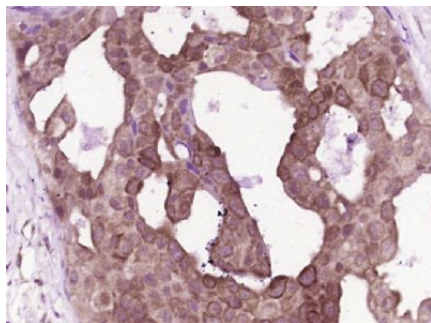
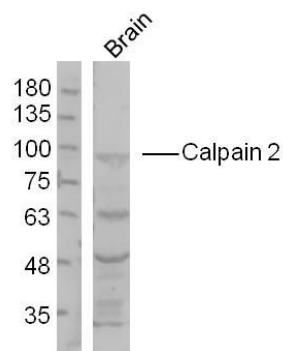


Sample:

NIH/3T3(Mouse) Cell Lysate at 30 ug
 Primary: Anti-Calpain 2 (AP56055) at 1/1000 dilution
 Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
 Predicted band size: 78 kD
 Observed band size: 78 kD

Sample:

Brain (Mouse) Lysate at 40 ug
 Primary: Anti- Calpain 2(AP56055) at 1/300 dilution
 Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
 Predicted band size: 78 kD
 Observed band size: 90 kD



Paraformaldehyde-fixed, paraffin embedded (human breast carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Calpain 2) Polyclonal Antibody, Unconjugated (AP56055) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.