

Calpain 2 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP56055

Specification

Calpain 2 Polyclonal Antibody - Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O08529
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	78 KDa
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.

Calpain 2 Polyclonal Antibody - 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~1:1000
IHC-P~N/A
IHC-F~N/A
IF~1:50~200
E~N/A

Format

0.01M TBS(pH7.4), 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.

Calpain 2 Polyclonal Antibody - 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

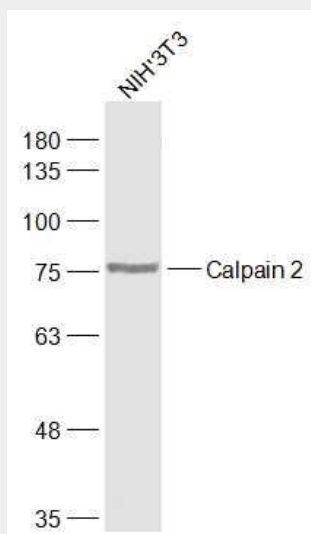
Ubiquitous.

Calpain 2 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Calpain 2 Polyclonal Antibody - Images



Sample:

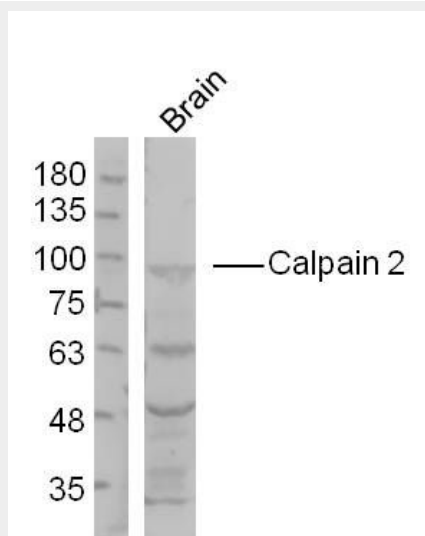
NIH/3T3(Mouse) Cell Lysate at 30 ug

Primary: Anti-Calpain 2 (bs-1599R) 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:

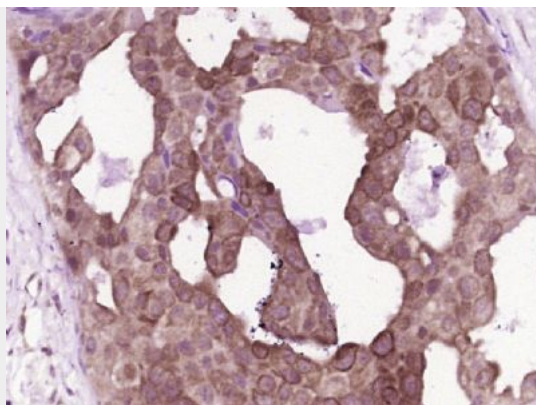
Brain (Mouse) Lysate at 40 ug

Primary: Anti- Calpain 2(bs-1599R) 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 (bs-1599R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.