bs-1599R **[Primary Antibody]**

Calpain 2 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

Target: Calpain 2

Immunogen: KLH conjugated synthetic peptide derived from mouse Calpain 2: 301-400/700.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: 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.

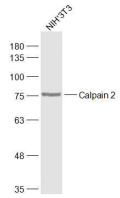
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)

Reactivity: Human, Mouse (predicted: Rat, Sheep, Cow, Dog)

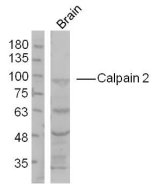
Predicted MW.: 78 kDa

Subcellular Location: Cell membrane ,Cytoplasm

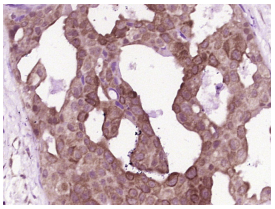
VALIDATION IMAGES



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) instructionsand DAB staining.

SELECTED CITATIONS

- **[IF=6.064]** Mengni Bao. et al. N-Acetylcysteine, an ROS Inhibitor, Alleviates the Pathophysiology of Hyperthyroidism-Induced Cardiomyopathy via the ROS/Ca2+ Pathway. BIOMOLECULES. 2022 Sep;12(9):1195 WB ;Mouse,Rat. 10.3390/biom12091195
- **[IF=2.9]** Xiaoyue Guan. et al. Ginsenoside Rb1 ameliorates apical periodontitis via suppressing macrophage pyroptosis. ORAL DIS. 2024 Aug;: IHC,IF,WB ;Human. 39155466