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Polyclonal Antibody to Calpain (737-758) - Aff - Purified

Alternate names: CANP, Calcium activated neutral Proteinase

Catalog No.: AP09931PU-N

Quantity: 0.1 mg

Concentration: 0.77 - 1.22 mg/ml (lot specific)

Background: Schistosoma mansoni is a parasite trematode that inhabits the blood vessels of its mammalian hosts and the causative agent for schistosomiasis which affect more than 200 million people. Because of the difficulties in maintaining the cultures of Schistosomas in laboratories, one approach to develop immunotheraphy against this disease is to clone the genes encoding antigens that are reactive to the antisera of infected hosts (1, 2). This approach led to identification of several candidate genes, one of these candidate genes (Rizk) has high degree of similarities ot the large subunit of calcium-activated neutral proteinase (CANP-calpain).
Calpain is an intracellular protease that is ubiquitouslty present in most mammalian tissues and is involved in activation of proteins kinase C, degradation of cytoskeletal and muscle proteins and modification of neurofilaments (3). The Calpain activity is modified by calcium and its endogenous inhibitor calpastin (4). There are 2 isoform of calpain uCalpain and mCalpain requiring uM and mM concentration of activators.
Calpain is a heterodimer consisting of 2 large 80kDa subunits and small 30 kDa subunit. There are two functional domains on large 80 kDa subunits, a papain like thiolprotease domain near N-terminal and a calmodulin like Calcium binding domain near the C-terminal end of the protein. The small subunit contains a calmodulin like calcium binding domain and a EF hand motif. Calpaian form Schistosoma mansoni has some degree of sequence similarity to calpain form human (4). The Schistosoma mansoni calpian has two putative glycosylation sites compared to one in human calpain. The amino-terminal end of calpain is rich in glycine which suggest its interaction with plasma membrane upon activation in the presence of calcium and phospholipids.

Uniprot ID: P27730

NCBI: 6183

Host: Rabbit

Immunogen: Synthetic peptide from Schistosoma mansoni Calpain form amino acid 737-758

Format: **State:** Liquid Ig fraction
Purification: Affinity chromatography
Buffer System: Stabilization buffer with 0.02% sodium azide.

Applications: ELISA.
Western blot: › 1:500.
Immunoprecipitation and i.p pull-down assays: › 1:200.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody detects Calpain at aa 737-758.

Species Reactivity: **Tested:** Human, mouse, rat

Storage: Store (in aliquots) at -20 °C. Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:
1. Wright DM., Henkle KJ., Mitchell GF. J. Immunology 144; 3195-3200, 1990
2. Stein LD., Harn DA., David JR., J. Biol. Chem. 256; 6582-6588, 1990
3. Pontremoli S and Melloni E. Ann. Rev. Biochem. 55, 455-481. 1986.
4. Anderson K., Tom DT., Strand M J. Biol. Chem. 266, 15085-15090, 1991.

Pictures: Western blot with AP09931PU-N (1:500).