

## Rabbit Polyclonal Anti-Calpain antibody

Catalog Number: CALP-101AP

Lot Number:

### General Information

<b>Product</b>	Calpain Antibody
<b>Description</b>	Schistosoma Calpain Antibody Affinity Purified
<b>Accession #</b>	Uniprot: P27730
<b>Verified Applications</b>	ELISA, IP, WB
<b>Species Cross Reactivity</b>	Schistosoma mansoni
<b>Host</b>	Rabbit
<b>Immunogen</b>	Synthetic peptide taken within amino acid region 700-760 on Schistosoma mansoni Calpain protein.
<b>Alternative Nomenclature</b>	Ca <sup>2</sup> activated neutral protease antibody, Calcium activated neutral proteinase 1 antibody, Calpain Large Polypeptide L1 antibody, Calpain mu type antibody, Calpain regulatory subunit antibody, Calpain small subunit 1 antibody, Calpain1 antibody, CANP 1 antibody, CANPL1 antibody, Cell proliferation-inducing gene 30 protein antibody, Micromolar Calpain antibody

### Physical Properties

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Immunoglobulin &amp; Concentration</b>	0.65 mg/ml IgG in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

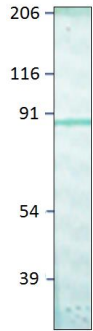
<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Immunoprecipitation</b>	1:200
<b>Western Blot</b>	1:500

### Related Products

### Catalog #

<b>BIOTIN-Conjugated</b>	CALP-BIOTIN
<b>FITC-Conjugated</b>	CALP-FITC
<b>Antigenic Blocking Peptide</b>	P-CALP
<b>Western Blot Positive Control</b>	PC-CALP

## Application Verification:



WB of CALP-101AP with PC-CALP. 1:500 antibody dilution in DiluObuffer. Apparent MW is 80-85 kDa.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

## Overview:

*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 immunotherapy 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 to the large subunit of calcium-activated neutral proteinase (CANP-Calpain).

Calpain is an intracellular protease that is ubiquitously present in most mammalian tissues and is involved in activation of protein 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 two isoforms of Calpain:  $\mu$ Calpain and  $m$ Calpain requiring  $\mu$ M and  $m$ M 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 an EF hand motif. Calpain from *Schistosoma mansoni* has some degree of sequence similarity to Calpain from human (4). The *Schistosoma mansoni* calpain has two putative glycosylation sites compared to one in human Calpain. The amino-terminal end of Calpain is rich in glycine which suggests its interaction with plasma membrane upon activation in the presence of calcium and phospholipids.

Anti-Calpain selective antibodies were generated using cyclic peptide methodology. The Calpain-selective antibodies were affinity purified against immobilized antigen based affinity chromatography and are represented as pure IgG fractions stabilized in antibody stabilization buffer. Western blot positive control in ready-to-use SDS-sample buffer (PC-CALP) and antigenic blocking peptide (P-CALP) are available. The polyclonal antibodies strongly label an 80-88 kDa protein from PC-Calpain sample on Western blots. The Calpain antibodies are also available as HRP conjugate for confocal, Western blotting and immunocytochemical analyses as special order item. Antibodies can be conjugated with fluorescent probes or other secondary enzymes upon request at extra charge. For a complete listing of all FabGennix antibodies and services, please visit <http://fabgennix.com>.

### References:

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.

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