

For Research Use Only

# CA3 Polyclonal antibody

Catalog Number: 15197-1-AP

Featured Product

8 Publications



## Basic Information

### Catalog Number:

15197-1-AP

### Size:

150ul, Concentration: 600 ug/ml by Nanodrop and 300 ug/ml by Bradford method using BSA as the standard;

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG7344

### GenBank Accession Number:

BC004897

### GeneID (NCBI):

761

### UNIPROT ID:

P07451

### Full Name:

carbonic anhydrase III, muscle specific

### Calculated MW:

29 kDa

### Observed MW:

30 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:2000-1:16000

IHC 1:200-1:1000

IF-P 1:50-1:500

## Applications

### Tested Applications:

WB, IHC, IF-P, ELISA

### Cited Applications:

WB, IHC, IF

### Species Specificity:

human, mouse, rat

### Cited Species:

human, mouse, rat

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB**: HEK-293 cells, mouse skeletal muscle tissue, rat skeletal muscle tissue, HeLa cells

**IHC**: mouse skeletal muscle tissue,

**IF-P**: mouse skeletal muscle tissue, human kidney tissue

## Background Information

Carbonic anhydrase III (CA3), which belongs to the alpha-carbonic anhydrase family, is a cytoplasmic enzyme that exhibits a relatively low carbon dioxide hydratase activity. It is expressed at a very high level in skeletal muscle, where physical exercise has been shown to increase free radical production. In addition to its carbon dioxide hydratase activity, CA3 has been demonstrated to have a carboxyl esterase activity and phosphatase activity, which suggests that it is a tyrosine phosphatase (PMID: 10064618). CA3 was found to be localized in Type-I muscle fibers and could be used as a marker for abnormal Type-I muscle fibers in several neuromuscular diseases (PMID: 6221502).

## Notable Publications

Author	Pubmed ID	Journal	Application
Claes-Göran Reibring	24789143	PLoS One	IHC
Dennis R. Clayton	35834272	Am J Physiol Renal Physiol	IF
Hiroyuki Yamamoto	35108454	FEBS Open Bio	WB

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

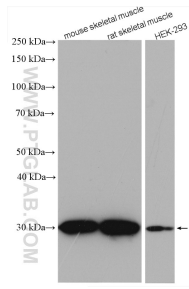
For technical support and original validation data for this product please contact:

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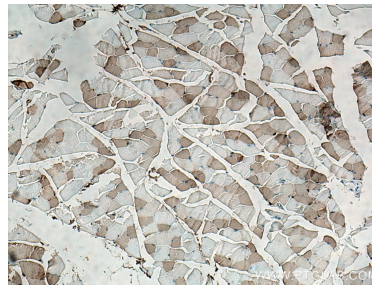
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

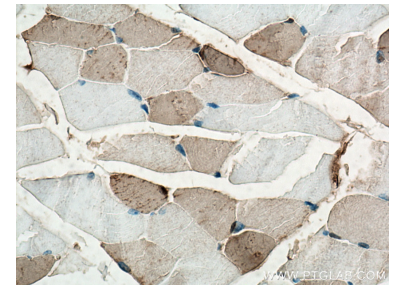
## Selected Validation Data



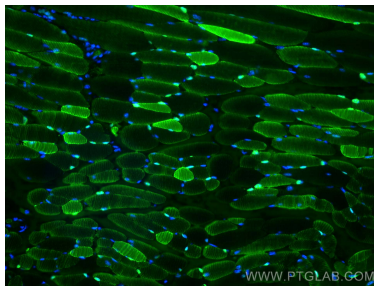
Various lysates were subjected to SDS PAGE followed by western blot with 15197-1-AP (CA3 antibody) at dilution of 1:8000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue slide using 15197-1-AP (CA3 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue slide using 15197-1-AP (CA3 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse skeletal muscle tissue using CA3 antibody (15197-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).