

For Research Use Only

# smooth muscle actin Polyclonal antibody



Catalog Number: 23081-1-AP

20 Publications

## Basic Information

**Catalog Number:**  
23081-1-AP

**Size:**  
150ul, Concentration: 300 µg/ml by Nanodrop and 173 µg/ml by Bradford method using BSA as the standard;

**Source:**  
Rabbit

**Isotype:**  
IgG

**Immunogen Catalog Number:**  
AG19481

**GenBank Accession Number:**  
BC017554

**GeneID (NCBI):**  
59

**Full Name:**  
actin, alpha 2, smooth muscle, aorta

**Calculated MW:**  
377 aa, 42 kDa

**Observed MW:**  
42 kDa

**Purification Method:**  
Antigen affinity purification

**Recommended Dilutions:**  
WB 1:1000-1:4000  
IP 0.5-4.0 ug for IP and 1:500-1:2000 for WB  
IHC 1:200-1:1000

## Applications

**Tested Applications:**  
IHC, IP, WB, ELISA

**Cited Applications:**  
IF, IHC, WB

**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:** mouse heart tissue, mouse brown adipose tissue, mouse kidney tissue, mouse liver tissue, mouse skeletal muscle tissue, rat heart tissue

**IP:** mouse heart tissue,

**IHC:** human heart tissue, mouse skeletal muscle tissue, human colon tissue, human liver cancer tissue, stromal tumor tissue, human hysteresomyoma tissue, human liver tissue, human small intestine tissue, human skeletal muscle tissue

## Background Information

ACTA2 (also known as  $\alpha$ -smooth muscle actin or  $\alpha$ -SMA) belongs to the actin family. Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. ACTA2 is primarily expressed in vascular smooth muscle and anti-ACTA2 is commonly used to marker smooth muscle cells. This antibody is specific to the ACTA2. It selectively stains the vascular smooth muscle but not cardiac or skeletal muscle.

## Notable Publications

Author	Pubmed ID	Journal	Application
Jan Krivanek	32968047	Nat Commun	IF
Yong He	25201080	Biochim Biophys Acta	WB
Dong Ma	34778361	Front Surg	IHC

## 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

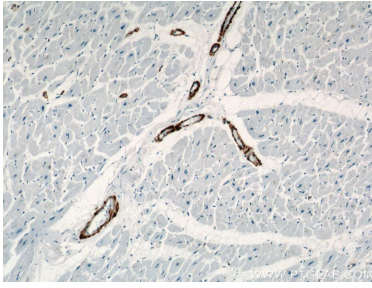
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

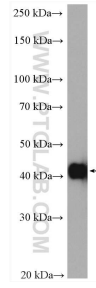
E: proteintech@ptglab.com  
W: ptglab.com

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

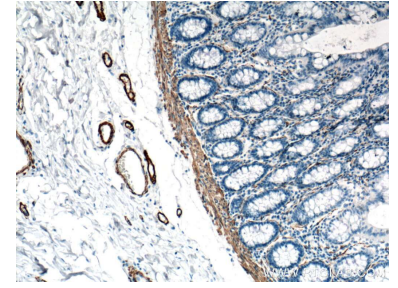
## Selected Validation Data



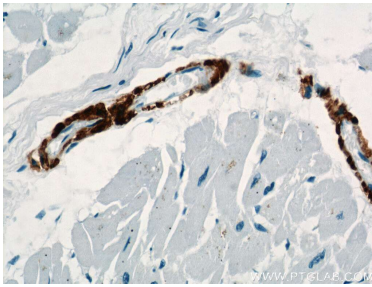
Immunohistochemical analysis of paraffin-embedded human heart using 23081-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:500 (under 10x lens).



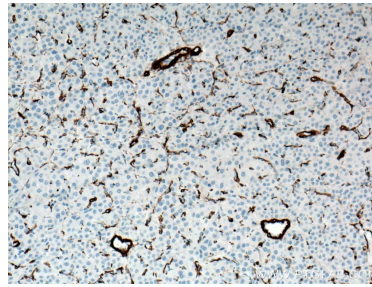
mouse heart tissue were subjected to SDS PAGE followed by western blot with 23081-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



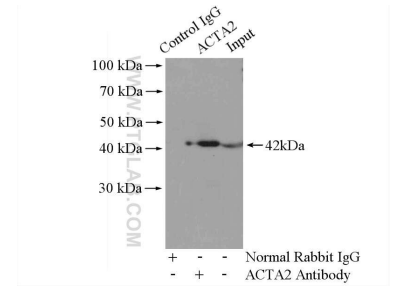
Immunohistochemical analysis of paraffin-embedded human colon tissue slide using 23081-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:6400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human heart using 23081-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:500 (under 40x lens).



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 23081-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:3200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP Result of anti- $\alpha$ -SMA specific (IP:23081-1-AP, 4 $\mu$ g; Detection:23081-1-AP 1:1000) with mouse heart tissue lysate 3200 $\mu$ g.