

For Research Use Only

Alpha smooth muscle actin Polyclonal antibody

Catalog Number: 14395-1-AP

Featured Product

1422 Publications



Basic Information

Catalog Number:

14395-1-AP

Size:

150ul, Concentration: 800 ug/ml by Nanodrop;

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG5886

GenBank Accession Number:

BC017554

GeneID (NCBI):

59

UNIPROT ID:

P62736

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: 1:2000-1:12000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:1500-1:6000

IF-P: 1:50-1:500

IF-Fro: 1:200-1:800

IF/ICC: 1:800-1:3200

FC (Intra): 0.40 ug per 10⁶ cells in a 100 µl suspension

Applications

Tested Applications:

WB, IHC, IF/ICC, IF-P, IF-Fro, FC (Intra), IP, ELISA

Cited Applications:

WB, IHC, IF, CoIP, competitive binding assay, IHC-IF

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat, pig, rabbit, canine, monkey, zebrafish, bovine, sheep

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 colon tissue, human placenta tissue, A549 cells, HUVEC cells, rat colon tissue, mouse heart tissue, rat heart tissue, mouse liver tissue, mouse kidney tissue

IP: mouse liver tissue,

IHC: human liver cancer tissue, human heart tissue, human colon tissue, human hysterosarcoma tissue, stromal tumor tissue, human appendicitis tissue, mouse colon tissue

IF-P: mouse heart tissue, mouse small intestine tissue

IF-Fro: mouse colon tissue,

IF/ICC: C2C12 cells, H9C2 cells

FC (Intra): C2C12 cells,

Background Information

ACTA2 (also known as α -smooth muscle actin or α -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 may cross-react with other isoforms of actins.

Notable Publications

Author	Pubmed ID	Journal	Application
Mengru Xie	32999278	Int J Oral Sci	WB,IF
Aipeng Deng	33321619	Mater Sci Eng C Mater Biol Appl	IF
Hui-Fang Wang	28970011	Eur J Pharmacol	WB,IF

Storage

Storage:

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

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

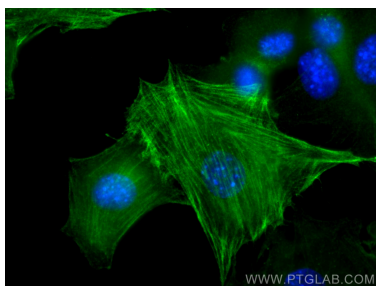
For technical support and original validation data for this product please contact:

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

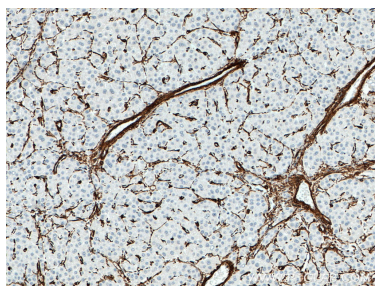
E: proteintech@ptglab.com
W: ptglab.com

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

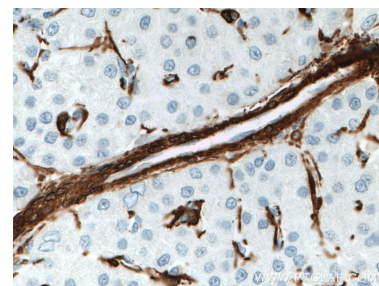
Selected Validation Data



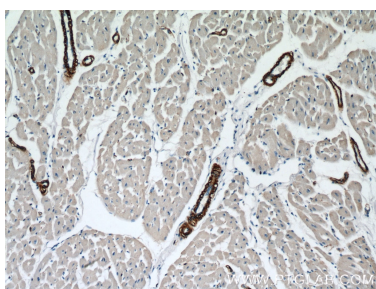
Immunofluorescent analysis of (-20°C Methanol) fixed C2C12 cells using smooth muscle actin antibody (14395-1-AP) at dilution of 1:1600 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



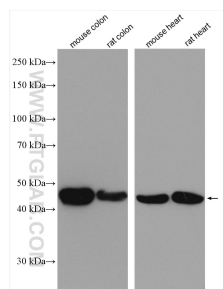
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 14395-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:3000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



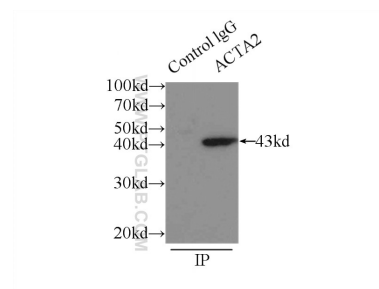
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 14395-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:3000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



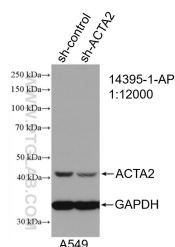
Immunohistochemical analysis of paraffin-embedded human heart tissue slide using 14395-1-AP (ACTA2/smooth muscle actin antibody) at dilution of 1:5000 (under 10x lens).



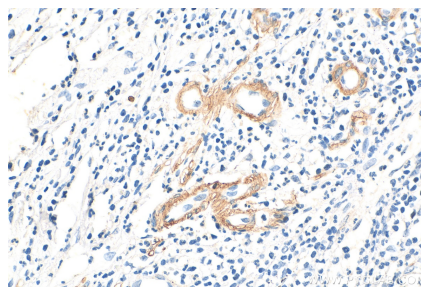
Various lysates were subjected to SDS PAGE followed by western blot with 14395-1-AP (smooth muscle actin antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours.



IP result of anti-smooth muscle actin (IP:14395-1-AP, 3ug; Detection:14395-1-AP 1:1000) with mouse liver tissue lysate 6000ug.



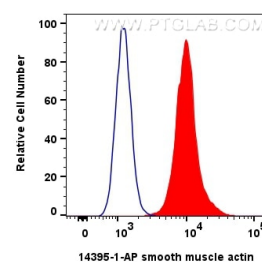
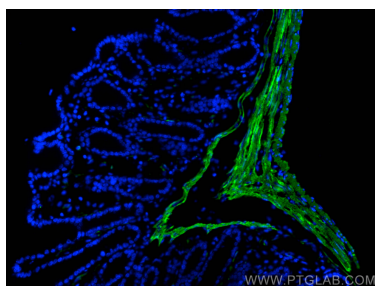
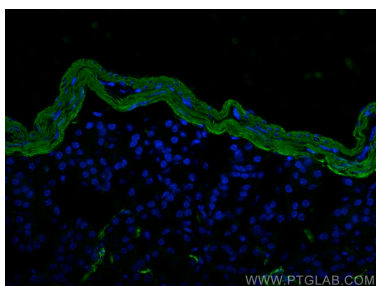
WB result of smooth muscle actin antibody (14395-1-AP; 1:12000; incubated at room temperature for 1.5 hours) with sh-Control and sh-smooth muscle actin transfected A549 cells.



Immunohistochemical analysis of paraffin-embedded human appendicitis tissue slide using 14395-1-AP (smooth muscle actin antibody) at dilution of 1:6000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed mouse heart tissue using 14395-1-AP (smooth muscle actin antibody) at dilution of 1:50 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Immunofluorescent analysis of (4% PFA) fixed mouse small intestine tissue using smooth muscle actin antibody (14395-1-AP) at dilution of 1:4000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).

Immunofluorescent analysis of (4% PFA) fixed frozen OCT-embedded mouse colon tissue using smooth muscle actin antibody (14395-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2).

1x10⁶ C2C12 cells were intracellularly stained with 0.4 ug smooth muscle actin Polyclonal antibody (14395-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.4 ug Rabbit IgG control Rabbit PolyAb (30000-0-AP) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).