

For Research Use Only

Alpha smooth muscle actin specific Recombinant monoclonal antibody

Catalog Number: 80008-2-RR



Basic Information

Catalog Number: 80008-2-RR	GenBank Accession Number: NM_001613	Purification Method: Protein A purification
Size: 100ul , Concentration: 1000 µg/ml by Nanodrop;	GeneID (NCBI): 59	CloneNo.: 250297G8
Source: Rabbit	UNIPROT ID: P62736	Recommended Dilutions: WB: 1:5000-1:50000 IHC: 1:500-1:2000 IF-P: 1:1000-1:4000
Isotype: IgG	Full Name: actin, alpha 2, smooth muscle, aorta	
	Calculated MW: 42 kDa	
	Observed MW: 42 kDa	

Applications

Tested Applications:

WB, IHC, IF-P, ELISA

Species Specificity:

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 colon tissue, rat colon tissue, mouse stomach tissue

IHC : human colon tissue,

IF-P : mouse kidney tissue, mouse heart tissue

Background Information

Alpha smooth muscle actin (α-SMA or ACTA2) is an actin isoform predominantly expressed in smooth muscle cells and is the most widely recognized marker for activated myofibroblasts. In healthy adult tissues, its expression is largely restricted to vascular and visceral smooth muscle. However, during tissue injury, fibrosis, or wound healing, fibroblasts differentiate into myofibroblasts with significant upregulation of α-SMA. Therefore, α-SMA serves as a critical immunohistochemical marker for detecting myofibroblast activation and studying pathological processes such as organ fibrosis (e.g., liver, kidney, lung) and cancer stroma remodeling.

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

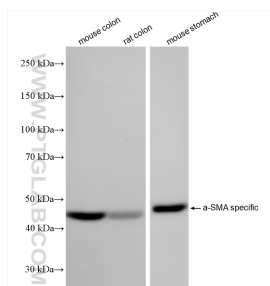
For technical support and original validation data for this product please contact:

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

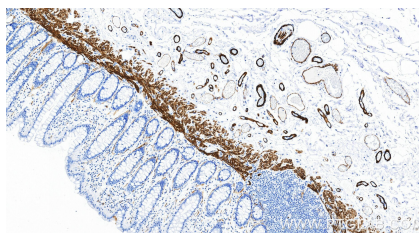
E: proteintech@ptglab.com
W: ptglab.com

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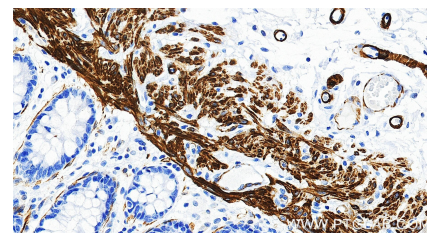
Selected Validation Data



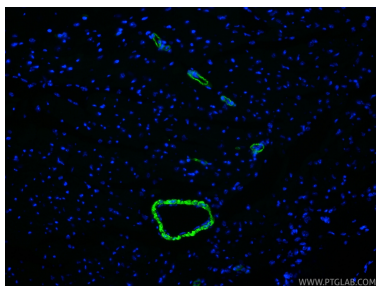
Various lysates were subjected to SDS PAGE followed by western blot with 80008-2-RR (a-SMA specific antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



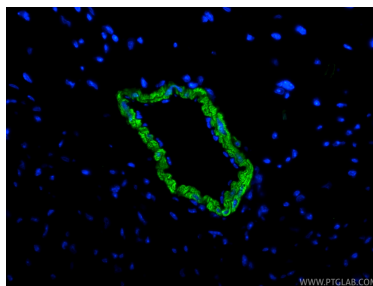
Immunohistochemical analysis of paraffin-embedded human colon tissue slide using 80008-2-RR (a-SMA specific antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



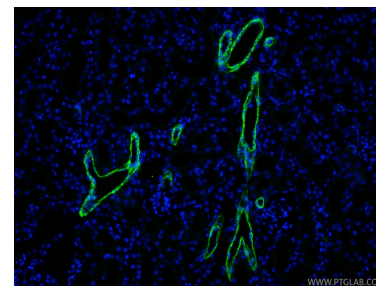
Immunohistochemical analysis of paraffin-embedded human colon tissue slide using 80008-2-RR (a-SMA specific antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



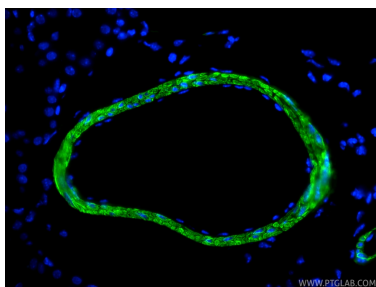
Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse heart tissue using a-SMA specific antibody (80008-2-RR, Clone: 250297G8) at dilution of 1:2000 and CoraLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse heart tissue using a-SMA specific antibody (80008-2-RR, Clone: 250297G8) at dilution of 1:2000 and CoraLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse kidney tissue using a-SMA specific antibody (80008-2-RR, Clone: 250297G8) at dilution of 1:2000 and CoraLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse kidney tissue using a-SMA specific antibody (80008-2-RR, Clone: 250297G8) at dilution of 1:2000 and CoraLite@488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).