

Alpha-Smooth Muscle Actin Recombinant Rabbit Monoclonal Antibody (17H19L35)

Product Details	
Size	100 µg
Species Reactivity	Human, Mouse, Rat
Published Species	Mouse
Host/Isotope	Rabbit / IgG
Class	Recombinant Monoclonal
Type	Antibody
Clone	17H19L35
Conjugate	Unconjugated
Immunogen	Peptide corresponding to amino acids 2–10 of human Smooth Muscle Actin
Form	Liquid
Concentration	0.5 mg/mL
Purification	Protein A
Storage buffer	PBS
Contains	0.09% sodium azide
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.
RRID	AB_2532485

Applications	Tested	Dilution	Published
Immunohistochemistry (IHC)	-	1:200	2 Publications
Immunofluorescence (IF)	✓	2-4 µg	1 Publication
Immunocytochemistry (ICC)	✓	2-4 µg	
Immunohistochemistry (Paraffin) (IHC (P))	✓	1:50-1:500	
Western Blot (WB)	✓	1-3 µg/mL	

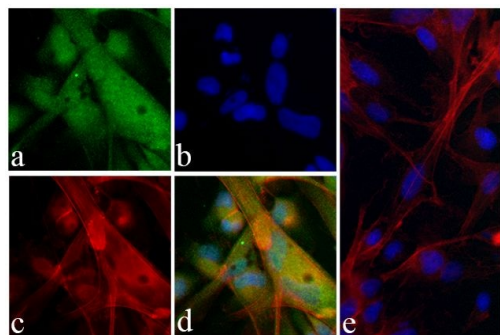
Product Specific Information

This antibody is predicted to react with bovine, canine, rabbit, rat and porcine based on sequence homology.

Intact IgG appears on a non-reducing gel as ~150 kDa band and upon reduction generating a ~25 kDa light chain band and a ~50 kDa heavy chain.

Recombinant rabbit monoclonal antibodies are produced using in vitro expression systems. The expression systems are developed by cloning in the specific antibody DNA sequences from immunoreactive rabbits. Then, individual clones are screened to select the best candidates for production. The advantages of using recombinant rabbit monoclonal antibodies include: better specificity and sensitivity, lot-to-lot consistency, animal origin-free formulations, and broader immunoreactivity to diverse targets due to larger rabbit immune repertoire.

Product Images For Alpha-Smooth Muscle Actin Recombinant Rabbit Monoclonal Antibody (17H19L35)

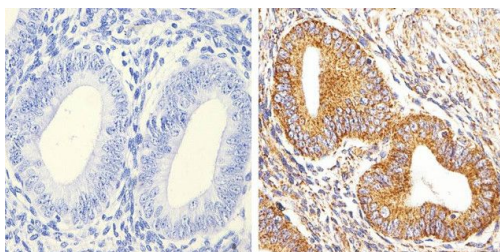


Alpha-Smooth Muscle Actin Antibody (701457) in IF

Immunofluorescent analysis of Smooth muscle actin was done on 70% confluent log phase MDCK cells. The cells were fixed with 4% paraformaldehyde for 15 minutes; permeabilized with 0.25% Triton X-100 for 10 minutes followed by blocking with 5% BSA for 1 hour at room temperature. The cells were incubated with Smooth muscle actin Recombinant Rabbit Monoclonal Antibody (Product # 701457) at 2 μ g-4 μ g in 1% BSA and incubated for 3 hours at room temperature and then labeled with Alexa Fluor® 488 Goat anti-Rabbit IgG Secondary Antibody (Product # A-11008) at a dilution of 1:400 for 30 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c: red) was stained with Alexa Fluor® 594 Phalloidin (Product # A12381). Panel d is a merged image showing actin filament localization of Smooth muscle actin. Panel e shows no primary antibody control. The images were captured at 20X magnification.

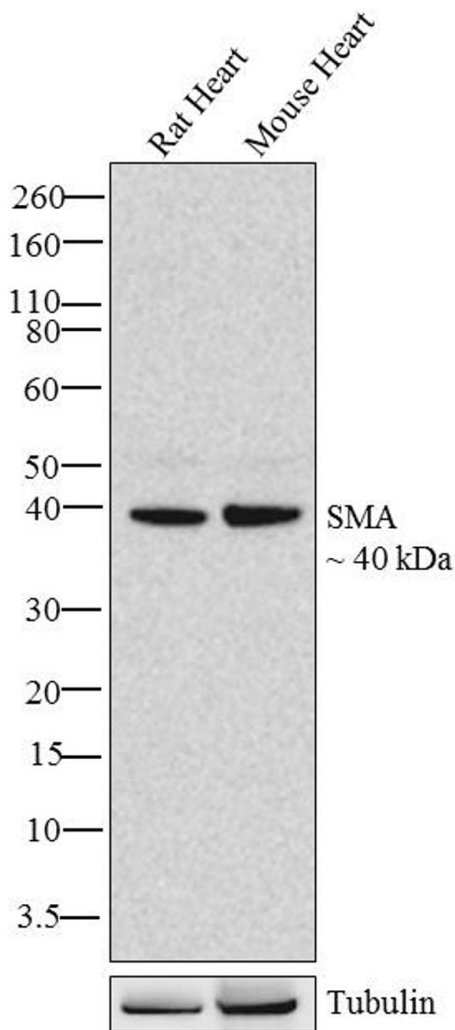
Alpha-Smooth Muscle Actin Antibody (701457) in IHC (P)

Immunohistochemistry analysis of Smooth Muscle Actin showing staining in the cytoplasm of paraffin-embedded human uterus tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10 mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature, washed with ddH₂O and PBS, and then probed with Smooth Muscle Actin monoclonal antibody (Product # 701457) diluted in 3% BSA-PBS at a dilution of 1:100 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using a HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Alpha-Smooth Muscle Actin Antibody (701457) in WB

Western blot analysis of Smooth Muscle Actin was performed by loading 20 μ g of Rat Heart (lane1) and Mouse Heart (lane2) tissue lysates using Novex®NuPAGE®4-12 % Bis-Tris gel (Product # NP0321BOX), XCell SureLock Electrophoresis System (Product # EI0002), Novex® Sharp Pre-Stained Protein Standard (Product # LC5800), and iBlot® Dry Blotting System (Product # IB21001). Proteins were transferred to a nitrocellulose membrane and blocked with 5 % skim milk for 1 hour at room temperature. Smooth Muscle Actin was detected at ~40 kDa using Smooth Muscle Actin Recombinant Rabbit Monoclonal Antibody (Product # 701457) at 1 μ g-3 μ g/mL in 2.5 % skim milk at 4°C overnight on a rocking platform. Goat anti-Rabbit IgG-HRP Secondary Antibody (Product # G21234) at 1:5000 dilution was used and chemiluminescent detection was performed using Pierce™ ECL Western blotting Substrate (Product # 32106).



[View more figures on thermofisher.com](https://www.thermofisher.com)

3 References

Immunohistochemistry (2)

Biology of sex differences

Severe pulmonary hypertension in aging female apolipoprotein E-deficient mice is rescued by estrogen replacement therapy.

"701457 was used in immunohistochemistry to follow the development of pulmonary hypertension in young and middle-aged female apolipoprotein E-deficient mice"

Authors: Umar S,Partow-Navid R,Ruffenach G,Iorga A,Moazeni S,Eghbali M

Species
Mouse

Dilution
Not Cited

Year
2018

Atherosclerosis

CD98 regulates vascular smooth muscle cell proliferation in atherosclerosis.

"701457 was used in immunohistochemistry to ask if CD98 heavy chain expressed on vascular smooth muscle cells plays a role in shaping the morphology of atherosclerotic plaques by regulating vascular smooth muscle cell function"

Authors: Baumer Y,McCurdy S,Alcala M,Mehta N,Lee BH,Ginsberg MH,Boisvert WA

Species
Mouse

Dilution
Not Cited

Year
2017

Biology of sex differences

Severe pulmonary hypertension in aging female apolipoprotein E-deficient mice is rescued by estrogen replacement therapy.

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