

## Product datasheet

anti-alpha-Smooth Muscle Actin mouse monoclonal,  
1A4/ASM-1, liquid, purified, sample

### Short overview

<b>Cat. No.</b>	690001S
<b>Quantity</b>	200 µl (100 µg/ml)
<b>Concentration</b>	100 µg/ml (20 µg)

### Product description

<b>Host</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Isotype</b>	IgG2a
<b>Clone</b>	1A4/ASM-1
<b>Immunogen</b>	Synthetic N-terminus decapeptide of alpha-smooth-muscle isoform of actin
<b>Formulation</b>	PBS, pH 7.4 with 0.09% sodium azide and 0.5% BSA
<b>UniprotID</b>	P62739 (Bovine), P08023 (Chicken), P62736 (Human), P62737 (Mouse), P62738 (Rat)
<b>Synonym</b>	Actin, aortic smooth muscle, Alpha-actin-2, Cell growth-inhibiting gene 46 protein [Cleaved into: Actin, aortic smooth muscle, intermediate form], ACTA2, ACTSA, ACTVS, GIG46
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity chromatography
<b>Storage</b>	Short term at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
<b>Intended use</b>	Research use only
<b>Application</b>	ICC/IF, IHC, WB
<b>Reactivity</b>	Bovine, Chicken, Horse, Human, Mouse, Rat

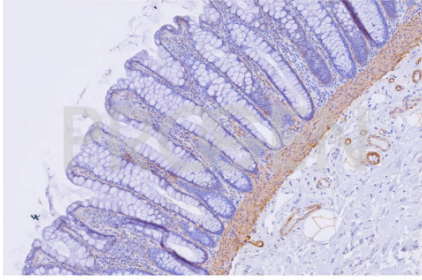
### Applications

<b>Immunocytochemistry (ICC)</b>	Assay dependent
<b>Immunohistochemistry (IHC) - frozen</b>	1:200-1:1,000 (100-500 ng/ml)
<b>Immunohistochemistry (IHC) - paraffin</b>	1:200-1:1,000 (100-500 ng/ml, protease treatment and/or microwave treatment recommended)
<b>Western Blot (WB)</b>	1:1,000 (100 ng/ml)

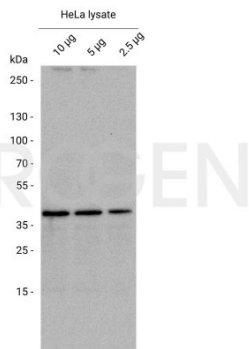
### Background

1A4/ASM-1 represents an excellent marker for myogenic soft tissue tumors and smooth muscle differentiation. Polypeptide reacting: specific for alpha-smooth-muscle isoform of actin (43 kDa). Tumors specifically detected: leiomyosarcoma, leiomyoma, certain stromal cells surrounding infiltrating ductal carcinoma of breast. Tested cultured cell lines: Stress fibers of smooth muscle-derived cells and some smooth muscle subtype fibroblasts

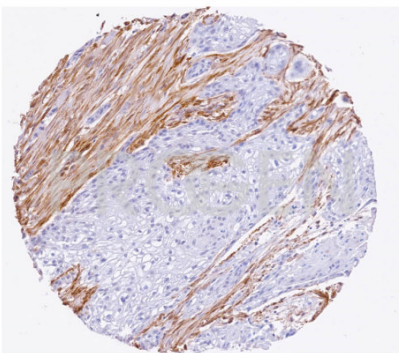
## Product images



IHC analysis of human colon using anti-alpha-Smooth Muscle Actin antibody. IHC was performed on formalin fixed paraffin embedded sections. The samples were deparaffinized with xylol and ethanol followed by heat induced antigen retrieval with 10 mM citrate buffer. After preparation the tissue was blocked with normal serum for 20 min at RT. The primary antibody anti-alpha-Smooth Muscle Actin mouse monoclonal, 1A4/ASM-1 (Cat. No. 690001) was diluted in PBS (antibody concentration 400 ng/ml) and incubated at 4°C over-night. The secondary antibody ImmPRESS HRP anti-mouse IgG was incubated for 20 min at RT. Slides were incubated with DAB solution until a brown staining is visible and with Haemalaun for a few minutes. The 10x picture was acquired using microscopy (courtesy of J.Hess, University Hospital Heidelberg).



Western blot analysis of human HeLa cell lysate with anti-alpha-Smooth Muscle Actin antibody. Western blot analysis was performed on either 10 µg, 5 µg or 2.5 µg of HeLa lysate. Cells were lysed in PBS by homogenization. The PVDF membrane was blocked with 5% dry milk in PBST for 1 h at RT. The primary antibody anti-alpha-Smooth Muscle Actin mouse monoclonal, 1A4/ASM-1 (Cat. No. 690001) was diluted in blocking buffer (antibody concentration 0.1 µg/ml) and incubated for 1 h at RT. The secondary antibody goat anti-mouse IgG polyclonal, HRP conjugate was also diluted in blocking buffer (antibody concentration 0.2 µg/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using Pierce™ ECL Western Blotting Substrate.



IHC analysis of head and neck squamous cell carcinoma using anti-alpha-Smooth Muscle Actin antibody. IHC was performed on formalin fixed paraffin embedded sections. The samples were deparaffinized with xylol and ethanol followed by heat induced antigen retrieval with 10 mM citrate buffer. After preparation the tissue was blocked with normal serum for 20 min at RT. The primary antibody anti-alpha-Smooth Muscle Actin mouse monoclonal, 1A4/ASM-1 (Cat. No. 690001) was diluted in PBS (antibody concentration 200 ng/ml) and incubated at 4°C over-night. The secondary antibody ImmPRESS HRP anti-mouse IgG was incubated for 20 min at RT. Slides were incubated with DAB solution until a brown staining is visible and with Haemalaun for a few minutes. The 10x picture was acquired using microscopy (courtesy of J.Hess, University Hospital Heidelberg).

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## References

Publication	Species	Application
<a href="#">Jiang, D. et al. MSCs rescue impaired wound healing in a murine LAD1 model by adaptive responses to low TGF-<math>\beta</math>1 levels. EMBO.Rep. 21, e49115 (2020)</a>	human,mouse	WB,IHC-IF (paraffin),ICC-IF
<a href="#">Schwinghammer, U. et al. <math>\beta</math>2-Adrenergic Receptor in Liver Fibrosis: Implications for the Adrenoblocker Mesedin. Cells. 9, (2020)</a>	human	IHC-IF,ICC-IF
<a href="#">Buniatian, G. et al. Antifibrotic Effects of Amyloid-Beta and Its Loss in Cirrhotic Liver. Cells. 9, (2020)</a>	mouse	IHC-IF,IHC (paraffin)
<a href="#">Hempel, F. et al. Depletion of Bone Marrow-Derived Fibrocytes Attenuates TAA-Induced Liver Fibrosis in Mice. Cells. 8, (2019)</a>	mouse	WB,IHC (paraffin)
<a href="#">Yakala, G. et al. FURIN Inhibition Reduces Vascular Remodeling and Atherosclerotic Lesion Progression in Mice. Arterioscler.Thromb.Vasc.Biol. 39, 387-401 (2019)</a>	mouse	IHC (paraffin)