Product datasheet

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

Short overview

Cat. No.	61001
Quantity	50 µg
Concentration	50 µg/ml after reconstitution with 1 ml dist. water

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG2a
Clone	1A4/ASM-1
Immunogen	Synthetic N-terminus decapeptide of alpha-smooth-muscle isoform of actin
Formulation	Lyophilized; reconstitute in 1 ml dist. water (final solution contains 0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4)
UniprotID	P62739 (Bovine),P08023 (Chicken),P62736 (Human),P62737 (Mouse),P62738 (Rat)
Synomym	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
Conjugate	Unconjugated
Purification	Affinity chromatography
Storage before reconstitution	2-8°C until indicated expiry date
Storage after reconstitution	Up to 3 months at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
Intended use	Research use only
Application	ICC/IF, IHC, WB
Reactivity	Bovine, Chicken, Horse, Human, Mouse, Rat

Applications

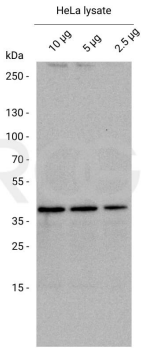
Immunocytochemistry (ICC)	Assay dependent
Immunohistochemistry (IHC) - frozen	1:100-1:500 (100-500 ng/ml)
Immunohistochemistry (IHC) - paraffin	1:100-1:500 (100-500 ng/ml, protease treatment and/or microwave treatment recommended)
Western Blot (WB)	1:500 (100 ng/ml)

Background

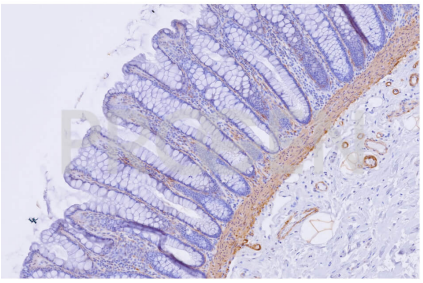
1A4/ASM-1 represents an excellent marker for myogenic soft tissue tumors and smooth muscle differentiation. Polypeptide reacting: specific for alpha-smooth-muscle isoform of actin (43 kDa). Tumors specificallly detected: leiomyosarcoma, leiomyoma, certain stromal cells surrounding

infiltrating ductal carcinoma of breast. Tested cultured cell lines: Stress fibers of smooth muscle-derived cells and some smooth muscle subtype fibroblasts

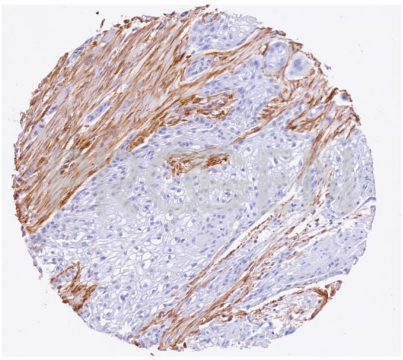
Product images



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 PierceTM ECL Western Blotting Substrate.



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 visable and with Haemalaun for a few minutes. The 10x picture was acquired using microscopy (courtesy of J.Hess, University Hospital Heidelberg).



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 visable and with Haemalaun for a few minutes. The 10x picture was acquired using microscopy (courtesy of J.Hess, University Hospital

Heidelberg).

References

Publication	Species	Application
Poosti, F. et al. Inhibition of renal fibrosis with a human CXCL9-derived glycosaminoglycan-binding peptide. Clin. Transl. Immunol. 11, 1â€“18 (2022).	Human, Mouse	ICC-IF, IHC-P-IF
Jiang, D. et al. MSCs rescue impaired wound healing in a murine LAD1 model by adaptive responses to low TGF-Î²1 levels. EMBO.Rep. 21, e49115 (2020)	human,mouse	WB,IHC-IF (paraffin),ICC-IF
Schwinghammer, U. et al. Î±2-Adrenergic Receptor in Liver Fibrosis: Implications for the Adrenoblocker Mesedin. Cells. 9, (2020)	human	IHC-IF,ICC-IF
Buniatian, G. et al. Antifibrotic Effects of Amyloid-Beta and Its Loss in Cirrhotic Liver. Cells. 9, (2020)	mouse	IHC-IF,IHC (paraffin)
Munir, S. et al. TLR4-dependent shaping of the wound site by MSCs accelerates wound healing. EMBO Rep. 21, e48777(2020).	mouse	IHC (frozen)/IF