

Anti-Actin, smooth muscle, clone ASM-1

Monoclonal Antibody

Cat. # CBL171

Lot # LV1586677

pack size: 50 µg

Store at -20°C

FOR RESEARCH USE ONLY
NOT FOR USE IN HUMANS



Certificate of Analysis

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Applications	Species Cross-Reactivity	Antibody Isotype	Epitope/Region	Host Species	Molecular Weight	Accession #
WB, IF, IH(P)	H, M, R, B, Ch, Eq	IgG2a	N-terminus	M	~43 kDa	NP_001604

Background

ASM-1 represents an excellent marker for myogenic soft tissue tumors and smooth muscle differentiation. This antibody reacts with many types of smooth muscle cells, such as those present in vascular walls, intestinal muscularis mucosae and propria, myometrium, stroma of various tissues, and is also positive for myoepithelial cells of various glands, notably salivary and mammary gland. Myogenic soft tissues detected include leiomyosarcomas, leiomyomas, and certain stromal cells surrounding infiltrating ductal carcinoma of the breast.

Presentation

Purified mouse monoclonal IgG2a presented as lyophilized material. Reconstitute in 1 mL of distilled water. Final solution is PBS, pH 7.4, containing 0.5% BSA and 0.09% sodium azide.

Specificity

This antibody is specific for the alpha-smooth-muscle isoform of actin (MW 43 kDa).

Species Cross-reactivity

Human, mouse, and rat. Expected to cross-react with bovine, equine and chicken. Reactivity with other species has not been confirmed.

Immunogen

Synthetic peptide corresponding to the ten N-terminal amino acids of the alpha-smooth muscle isoform of actin.

Molecular Weight

43 kDa

Method of Purification

Protein A Purified

Storage and Handling

Stable for 1 year at -20°C in undiluted aliquots from date of receipt.

Handling Recommendations: Upon first thaw, and prior to removing the cap, centrifuge the vial and gently mix the solution. Aliquot into microcentrifuge tubes and store at -20°C. Avoid repeated freeze/thaw cycles, which may damage IgG and affect product performance.

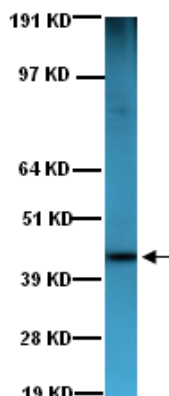
Control

Positive reaction using stress fibers of smooth muscle-derived cells and some smooth muscle subtype fibroblasts.

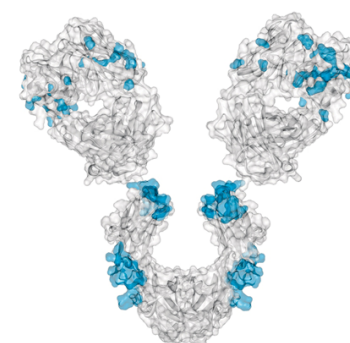
Quality Control Testing

Evaluated by Western Blot using HUVEC lysate.

Western Blot Analysis: 1:1000 dilution of this antibody detects actin, smooth muscle in 10 µg of HUVEC lysate.



Western Blot Analysis: Representative lot data.
HUVEC lysate was resolved by electrophoresis, transferred to PVDF membrane and probed with anti-Actin, smooth muscle (1:1000 dilution). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and a chemiluminescence detection system.
Arrow indicates protein Actin, smooth muscle (~43 kDa).



References

- Ehler, Elisabeth, *et al.* (2004). *Dev Dyn.* 229:745-55.
- Demirkesen, C., *et al.* (1995). *J Cutan Pathol.* 22:518-35.
- Schurch, W., *et al.* (1987). *Am. J. Pathol.* 128:91-103.
- Skalli, O., *et al.* (1986). *J. Cell Biol.* 103:2787-2796.

Additional Research Applications

Immunohistochemistry: 1:100 dilution of a previous lot was used on frozen and formalin-fixed, paraffin-embedded tissues; protease pretreatment is recommended for paraffin-embedded sections.

Immunofluorescence: A previous lot of this antibody was used on Immunofluorescence.

Optimal working dilutions must be determined by the end user.

APPLICATION LEGEND: WB Western Blotting IP Immunoprecipitation IC Immunocytochemistry IF Immunofluorescence
IH Immunohistochemistry (Tissue) IH(P) Immunohistochemistry (Paraffin)

SPECIES LEGEND: B Bovine Ch Chicken Eq Equine (Horse) H Human M Mouse R Rat Rb Rabbit

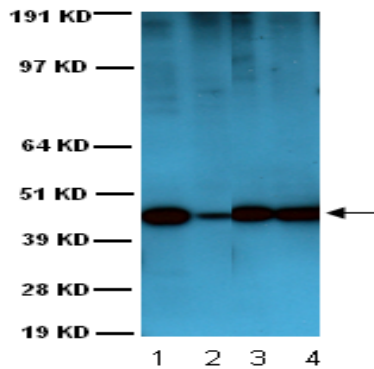
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Additional Research Applications



Western Blot Analysis:

Representative lot data.

Human Placenta lysate (Lane 1), Huvec lysate (Lane 2), L6 lysate (Lane 3), and Mouse brain lysate (Lane 4) were resolved by electrophoresis, transferred to PVDF membrane and probed with anti-Actin, smooth muscle (1:1000 dilution of a previous lot).

Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and a chemiluminescence detection system.

Arrow indicates protein Actin, smooth muscle (~43 kDa).

Important Note: During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µL or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.

PROTOCOL

Western Blot

1. Perform SDS-polyacrylamide gel electrophoresis (SDS-PAGE) on cell lysate and transfer the proteins to a PVDF membrane. Wash the PVDF membrane twice with water.
2. Block the blotted PVDF membrane in freshly prepared 5% BSA with 0.05% Tween®-20 for 1 hour at room temperature with constant agitation.
3. Incubate the PVDF with the recommended dilution of anti-Actin, smooth muscle, clone ASM-1 diluted in freshly prepared 5% BSA for 1 hour at room temperature or overnight with agitation at 2-8°C.
4. Wash the PVDF 3 times with TBST.
5. Incubate the PVDF in the secondary reagent of choice (a goat anti-mouse HRP conjugated IgG, Catalog # 12-349 1:1000 dilution was used) in 5% milk for 1 hour with agitation at room temperature.
6. Wash the PVDF 3-5 times with TBST.
7. Use Spray and Glow Catalog # 17-373 to visualize results. Use as directed.

RELATED PRODUCTS (specific)

cat #	description
AB978	■ Anti-Actin
MAB1279	■ Anti-Actin Bundles, clone 420-8
MAB1501X	■ Anti-Actin, a.a. 50-70, Clone C4, AlexaFluor® 488 Conjugated
MAB3128	■ Anti-Actin, clone 10A5
MAB1501	■ Anti-Actin, clone C4
AB3265	■ Anti-Actin, gamma
MAB1501R	■ Anti-Actin, near a.a. 50-70, clone C4
MAB1522	■ Anti-Actin, smooth muscle gamma & alpha actin, clone CGA7
CBL171	■ Anti-Actin, smooth muscle, clone ASM-1
AB3415	■ Anti-F-actin Capping Protein, alpha-1 subunit, aa80-150
IHCR2020-6	■ IHC Select® Anti-Actin, prediluted, clone HHF35
IHCR2002-6	■ IHC Select® Anti-Actin, prediluted, smooth muscle, clone CGA7
FAK100	■ Actin Cytoskeleton / Focal Adhesion Staining Kit
IHC2020-6	■ IHC Select® Anti-Actin, prediluted, clone HHF35
IHC2002-6	■ IHC Select® Anti-Actin, prediluted, smooth muscle, clone CGA7

RELATED PRODUCTS (non-specific)

cat #	description
IPVH00010	■ Immobilon-P 26.5 cm x 3.75 m Roll PVDF 0.45 µm
IPFL00010	■ Immobilon-FL 26.5 cm x 3.75 m Roll PVDF 0.45 µm
IPVH07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.45 mm (sheet) 50/pk
ISEQ00010	■ Immobilon-P SQ 26.5 cm x 3.75 m 1 roll PVDF 0.2 µm
ISEQ07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.2 mm (sheet) 50/pk
IPFL07810	■ Immobilon-FL 7 x 8.4 cm PVDF 0.45 mm (sheet) 10/pk
WBKLS0100	■ Immobilon Western Chemilum HRP Substrate 100 mL
17-373	■ Spray & Glow™ ECL WB Detection System 1 ea
2060	■ Re-Blot Western Blot Recycling Kit
2500	■ Re-Blot Plus Western Blot Recycling Kit
B2080-175GM	■ Blot Quick Blocker Membrane Blocking Agent 175G

■ antibodies ■ Multiplex products ■ biotools ■ cell culture ■ enzymes ■ kits ■ proteins/peptides ■ siRNA/cDNA products

Please visit www.millipore.com for additional product information, test data and references

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