bsm-33187M **[Primary Antibody]**

alpha smooth muscle Actin Mouse mAb

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DATASHEET

Host: Mouse
Isotype: IgG
Clonality: Monoclonal
CloneNo.: 3F9
GeneID: 59
SWISS: P62736
Target: alpha smooth muscle Actin
Purification: affinity purified by Protein G
Concentration: 1mg/ml
Storage: Size : 50ul/100ul/200ul
0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Size : 200ug (PBS only)
0.01M PBS
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: All eukaryotic cells express Actin, which often constitutes as much as 50% of total cellular protein. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. While lower eukaryotes, such as yeast, have only one Actin gene, higher eukaryotes have several isoforms encoded by a family of genes. At least six types of Actin are present in mammalian tissues and fall into three classes. alpha-Actin expression is limited to various types of muscle, whereas beta- and gamma-Actin are the principle constituents of filaments in other tissues. Members of the small GTPase family regulate the organization of the Actin cytoskeleton. Rho controls the assembly of Actin stress fibers and focal adhesion. Rac regulates Actin filament accumulation at the plasma membrane. Cdc42 stimulates formation of filopodia.

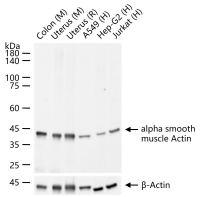
Applications: **WB** (1:500-5000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1ug/Test)

Reactivity: Human, Mouse, Rat (predicted: Chicken)

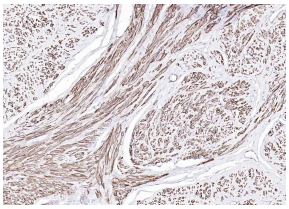
Predicted MW.: 42 kDa

Subcellular Location: Cytoplasm

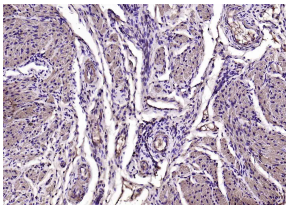
VALIDATION IMAGES



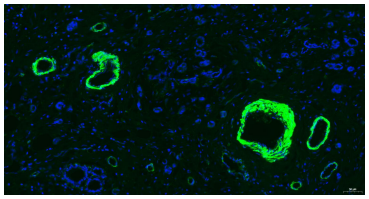
25 ug total protein per lane of various lysates (see on figure) probed with alpha smooth muscle Actin monoclonal antibody, unconjugated (bsm-33187M) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.

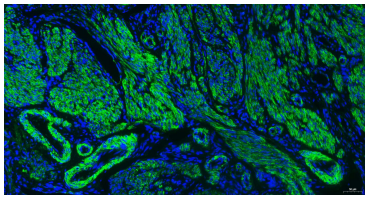


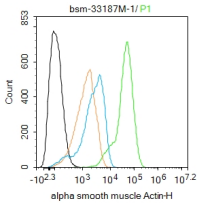
Paraformaldehyde-fixed, paraffin embedded (Human uterus); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (bsm-33187M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat uterus); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (bsm-33187M) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructionsand DAB staining.







Paraformaldehyde-fixed, paraffin embedded Human Breast Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (bsm-33187M) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green, bs-0296G-BF488), DAPI (blue, C02-04002) was used to stain the cell nuclei.

Paraformaldehyde-fixed, paraffin embedded Human Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (bsm-33187M) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green, bs-0296G-BF488), DAPI (blue, C02-04002) was used to stain the cell nuclei.

Blank control:NIH/3T3. Primary Antibody (green line): Mouse Anti-alpha smooth muscle Actin antibody (bsm-33187M) Dilution: 1ug/Test; Secondary Antibody : Goat anti-mouse IgG-FITC Dilution: 0.5ug/Test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20°C.The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=18]** Zetao Wang. et al. Nano-vibration exciter: Hypoxia-inducible factor 1 signaling pathway-mediated extracellular vesicles as bioactive glass substitutes for bone regeneration. BIOACT MATER. 2024 Oct;40:460 IF ;Rat. 10.1016/j.bioactmat.2024.06.023
- **[IF=16.6]** Li Yin. et al. UPP1 promotes lung adenocarcinoma progression through the induction of an immunosuppressive microenvironment. NAT COMMUN. 2024 Feb;15(1):1-23 IF ;Human. 38331898
- **[IF=13.6]** Juan Yan. et al. Engineered exosomes reprogram Gli1+ cells in vivo to prevent calcification of vascular grafts and autologous pathological vessels. SCI ADV. 2023 Jul;9(29) WB ;Human. 37478186
- **[IF=10.6]** Yu Shujun. et al. Thermosensitive hydrogel as a sustained release carrier for mesenchymal stem cell-derived extracellular vesicles in the treatment of intrauterine adhesion. J NANOBIOTECHNOL. 2024 Dec;22(1):1-17 WB,IHC ;Mouse. 39289737
- **[IF=10.435]** Mei, Jiawei. et al. An injectable photo-cross-linking silk hydrogel system augments diabetic wound healing in orthopaedic surgery through spatiotemporal immunomodulation. J NANOBIOTECHNOL. 2022 Dec;20(1):1-22 IHC ;Mouse. 35568914