bsm-33188M **[Primary Antibody]**

ACTA2 | alpha-Actin-2 Mouse mAb

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DATASHEET

Host: Mouse
Isotype: IgG
Clonality: Monoclonal
CloneNo.: 8B2
GeneID: 59
SWISS: P62736
Target: ACTA2 | alpha-Actin-2
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 (pH7.4).
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 (1:100-200)
ICC/IF (1:100-200)

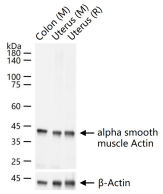
Reactivity: Human, Mouse, Rat (predicted: Chicken)

Predicted MW.: 42 kDa

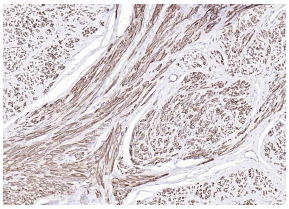
Observed MW.: 42 kDa

Subcellular Location: Cytoplasm

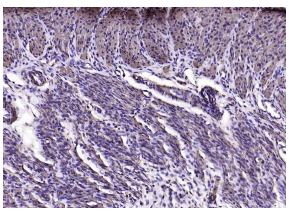
VALIDATION IMAGES



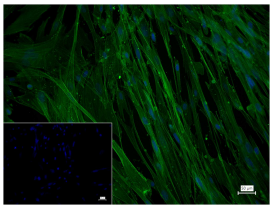
25 ug total protein per lane of various lysates (see on figure) probed with alpha smooth muscle Actin monoclonal antibody, unconjugated (bsm-33188M) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



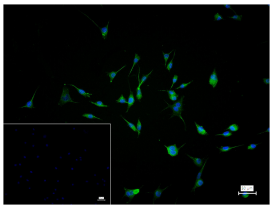
Paraformaldehyde-fixed, paraffin embedded Human Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated(bsm-33188M) at 1:200 overnight at 4°C, followed by conjugation to the bs-40296G-HRP and DAB (C-0010) staining.



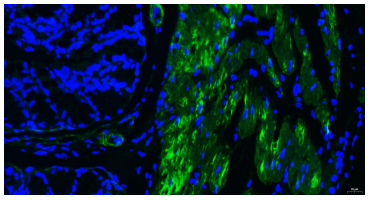
Paraformaldehyde-fixed, paraffin embedded Mouse Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated(bsm-33188M) at 1:200 overnight at 4°C, followed by conjugation to the bs-40296G-HRP and DAB (C-0010) staining.



4% Paraformaldehyde-fixed WI-38 (treated with 5 ng/mL TGF-β1 for 72h) (H) cell; Triton X-100 at r.t. for 20 min; Antibody incubation with (alpha



4% Paraformaldehyde-fixed NIH/3T3 treated with 5 ng/mL TGF-β1 for 72h (M) cell; Triton X-100 at r.t. for 20 min; Antibody incubation with



Paraformaldehyde-fixed, paraffin embedded Mouse colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min;

smooth muscle Actin) monoclonal Antibody, unconjugated (bsm-33188M) 1:100, 90 min at 37°C; followed by BF488 conjugated Goat Anti-Mouse IgG antibody (green, bs-60296G-BF488) at 37°C for 90 min, DAPI (blue, C02-04002) was used to stain the cell nuclei. PBS instead of the primary antibody was used as the blank control.

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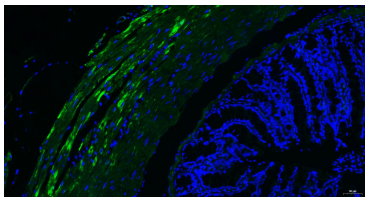
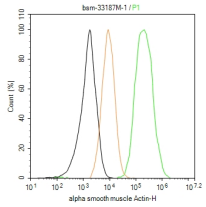
Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (bsm-33187M) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green, bs-0296G-BF488), DAPI (blue, C02-04002) was used to stain the cell nuclei.



Paraformaldehyde-fixed, paraffin embedded Rat colon; 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.



The WI-38 (treated with 5 ng/mL TGF-β1 for 72h) (H) cells were fixed with 4% PFA (10 min at r.t.) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C,the cells then were incubated in 5%BSA to block non-specific protein-protein interactions (30 min at r.t.). Cells stained with Primary Antibody for 30 min at room temperature,followed by secondary antibody incubation for 40 min at room temperature. Primary Antibody (green):Mouse Anti-alpha smooth muscle Actin antibody (bsm-33188M,1:100); Isotype Control (orange): Mouse IgG (bs-0296P). Blank control (black): PBS. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=17.521]** Huan Lei. et al. A Combination Therapy Using Electrical Stimulation and Adaptive, Conductive Hydrogels Loaded with Self-Assembled Nanogels Incorporating Short Interfering RNA Promotes the Repair of Diabetic Chronic Wounds. Advanced Science. 2022 Sep;:2201425 IF ;Rat. 36064844
- **[IF=14.3]** Huan Lei. et al.Nanocomposite Hydrogel for Real‐Time Wound Status Monitoring and Comprehensive Treatment.advanced science.2024 Nov;11(42):e2405924. IF ;Rat. 39269428
- **[IF=14.3]** Huan Lei. et al. Nanocomposite Hydrogel for Real-Time Wound Status Monitoring and Comprehensive Treatment. ADV SCI. 2024 Sep;:2405924 IF ;Rat. 39269428
- **[IF=5.064]** Xia Liu. et al. The adipokine orosomucoid alleviates adipose tissue fibrosis via the AMPK pathway. Acta Pharmacol Sin. 2021 Apr;:1-9 WB,IF ;Mouse. 33875797
- **[IF=4.8]** Jinying Liu. et al. Deacetylation of HnRNP U mediated by sirtuin1 ameliorates aged rat with liver fibrosis via inhibiting p53-related senescence and NLRP3-related inflammation. INT IMMUNOPHARMACOL. 2024 Nov;141:113026 WB ;Rat. 39216234