bs-0189R **[Primary Antibody]**

alpha smooth muscle Actin Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 59 **SWISS:** P62736

Target: alpha smooth muscle Actin

Immunogen: KLH conjugated synthetic peptide derived from human Actin alpha: 301-375/375.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
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.

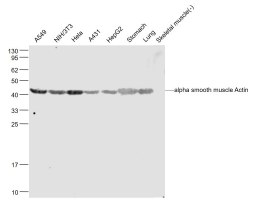
Applications: **WB** (1:1000-5000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1μg/Test)

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

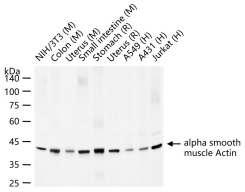
Predicted MW.: 42 kDa

Subcellular Location: Cytoplasm

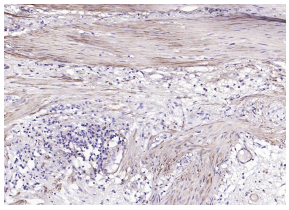
VALIDATION IMAGES



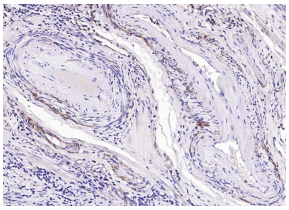
Sample: A549(Human) Cell Lysate at 30 ug NIH/3T3(Mouse) Cell Lysate at 30 ug Hela(Human) Cell Lysate at 30 ug A431(Human) Cell Lysate at 30 ug HepG2(Human) Cell Lysate at 30 ug Stomach (Mouse) Lysate at 40 ug Lung (Mouse) Lysate at 40 ug Skeletal muscle(-) (Mouse) Lysate at 40 ug Primary: Anti-alpha smooth muscle Actin (bs-0189R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 42 kD Observed band size: 42 kD



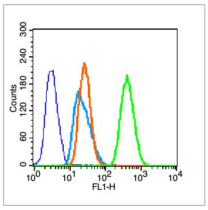
25 ug total protein per lane of various lysates (see on figure) probed with alpha smooth muscle Actin polyclonal antibody, unconjugated (bs-0189R) at 1:2000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



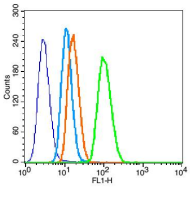
Paraformaldehyde-fixed, paraffin embedded Human Colon Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Polyclonal Antibody, Unconjugated (bs-0189R) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded



Blank control (blue line): Hela (fixed with 70%



Blank control (blue line): Hela (blue). Primary

Human Cervical Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Polyclonal Antibody, Unconjugated (bs-0189R) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023) and DAB (C-0010) staining.

ethanol (Overnight at 4°C) and then permeabilized with 90% ice-cold methanol for 30 min on ice). Primary Antibody (green line): Rabbit Anti-alpha smooth muscle Actin antibody (bs-0189R),Dilution: 1µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC,Dilution: 1µg /test.

Antibody (green line): Rabbit Anti-alpha smooth muscle Actin antibody (bs-0189R) Dilution: 1µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC Dilution: 1µg /test. Protocol The cells were fixed with 80% methanol (5 min at -20°C) and then permeabilized with 0.1% PBS-Tween for 20 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

SELECTED CITATIONS

- **[IF=15.1]** Shan Zhong. et al. Electrical and immune stimulation-based hydrogels synergistically realize scarless wound healing via amplifying endogenous electrophysiological function and promoting Macrophage Phenotype-Switching. CHEM ENG J. 2024 Jul;491:152048 IHC ;Rat,Rabbit. 10.1016/j.cej.2024.152048
- **[IF=10.6]** Gong Xinxian. et al. Ferrocene-derived magnetic fiber-particles from diesel exhaust: enhanced pulmonary toxicity via Bach1-SAT1-polyamine depletion. J NANOBIOTECHNOL. 2025 Dec;23(1):1-21 WB ;Human. 40301891
- **[IF=10.7]** Jiayi Li. et al. Chronic arsenic exposure-provoked biotoxicity involved in liver-microbiota-gut axis disruption in chickens based on multi-omics technologies. J ADV RES. 2024 Jan;: WB ;Chicken. 38237767
- **[IF=10.171]** Wan Zhou. et al. Retinol binding protein 4 promotes the phenotypic transformation of vascular smooth muscle cells under high glucose condition via modulating RhoA/ROCK1 pathway. TRANSL RES. 2023 Mar;: WB ;Rat. 37003483
- **[IF=8.713]** Zhao-Bo Luo. et al. Fecal transplant from myostatin deletion pigs positively impacts the gut-muscle axis. ELIFE. 2023; 12: e81858 WB ;Mouse. 37039469