bs-10196R **[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: 165-260/377.

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.

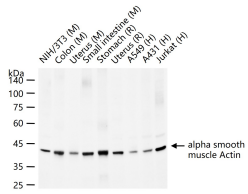
Applications: **WB** (1:2000-10000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1µg/Test)

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

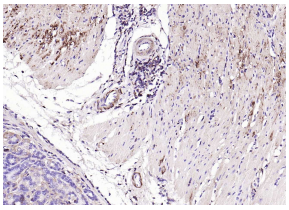
Predicted MW.: 42 kDa

Subcellular Location: Cytoplasm

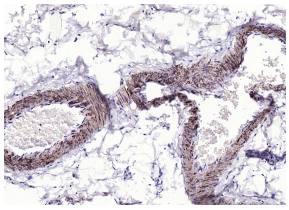
VALIDATION IMAGES



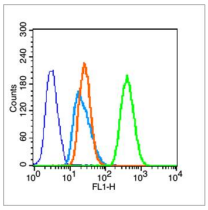
25 ug total protein per lane of various lysates (see on figure) probed with alpha smooth muscle Actin polyclonal antibody, unconjugated (bs-10196R) at 1:2000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



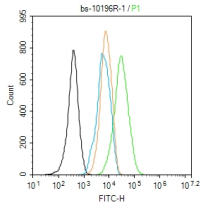
Paraformaldehyde-fixed, paraffin embedded (mouse stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (alpha smooth muscle Actin) Polyclonal Antibody, Unconjugated (bs-10196R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Human duodenum); 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) Polyclonal Antibody, Unconjugated (bs-10196R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



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



Blank control: NIH/3T3. Primary Antibody (green

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-10196R),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.

line): Rabbit Anti-alpha smooth muscle Actin antibody (bs-10196R) Dilution: 1μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-AF488 Dilution: 1μg /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=18.9]** Yonghong Fan. et al. Construction of tissue-engineered vascular grafts with enhanced patency by integrating heparin, cell-adhesive peptide, and carbon monoxide nanogenerators into acellular blood vessels. BIOACT MATER. 2024 Apr;34:221 IF ;Human. 10.1016/j.bioactmat.2023.12.015
- **[IF=14.593]** Binbin He. et al. 3D printed biomimetic epithelium/stroma bilayer hydrogel implant for corneal regeneration. Bioact Mater. 2022 Jan;: IF ;Rabbit. 10.1016/j.bioactmat.2022.01.034
- **[IF=15.1]** Linlin Tao. et al. Synergistic strategy based on mild phototherapy and deep tumor hypoxia reversal comprehensively remodels the tumor microenvironment for improved immunotherapy. CHEM ENG J. 2023 Sep;472:145092 IF ;Mouse. 10.1016/j.cej.2023.145092
- **[IF=12.9]** Wenqiang Chen. et al. Remodeling tumor microenvironment by versatile nanoplatform orchestrated mechanotherapy with chemoimmunotherapy to synergistically enhance anticancer efficiency. BIOMATERIALS. 2025 Jan;:123104 IF ;Mouse. 39813969
- **[IF=12.479]** Pan Zhang. et al. The programmed site-specific delivery of LY3200882 and PD-L1 siRNA boosts immunotherapy for triple-negative breast cancer by remodeling tumor microenvironment. BIOMATERIALS. Biomaterials. 2022 Apr;:121518 IHC ;Mouse. 35462305