bs-10196R **[Primary Antibody]**

ACTA2 | alpha-Actin-2 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 59 **SWISS:** P62736

Target: ACTA2 | alpha-Actin-2

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 (1:200-800)
IHC-F (1:200-800)
IF (1:200-800)
Flow-Cyt (1:100-200)
ICC/IF (1:100-200)

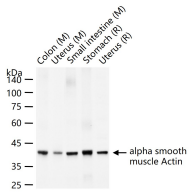
Reactivity: Human, Mouse, Rat (predicted: Rabbit, Dog)

Predicted MW.: 42 kDa

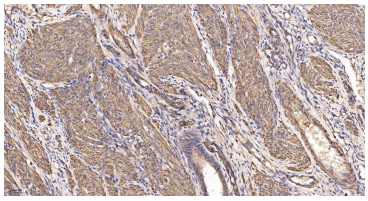
Observed MW.: 42 kDa

Subcellular Location: Cytoplasm

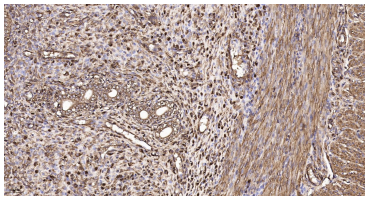
VALIDATION IMAGES



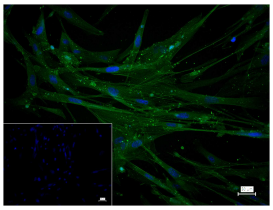
25 ug total protein per lane of various lysates (see on figure) probed with alpha smooth muscle Actin polyclonal antibody, unconjugated (bs-10196R) at 1:2000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



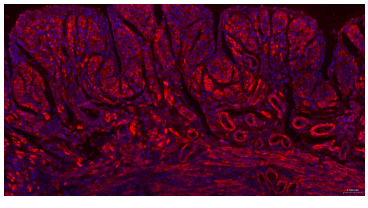
Paraformaldehyde-fixed, paraffin embedded Human Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with alpha smooth muscle Actin Polyclonal Antibody, Unconjugated (bs-10196R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



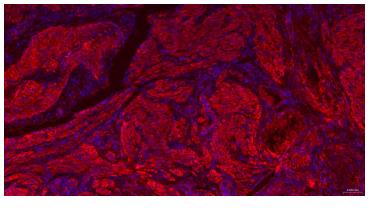
Paraformaldehyde-fixed, paraffin embedded Rat Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with alpha smooth muscle Actin Polyclonal Antibody, Unconjugated (bs-10196R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP 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 smooth muscle Actin) polyclonal Antibody,



Paraformaldehyde-fixed, paraffin embedded Mouse Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with alpha smooth

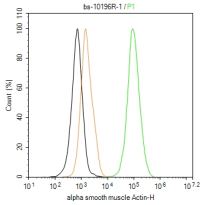


Paraformaldehyde-fixed, paraffin embedded Human Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with alpha smooth

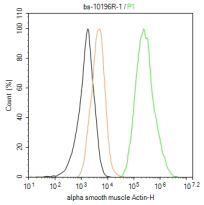
unconjugated (bs-10196R) 1:100, 90 min at 37°C; followed by BF488 conjugated Goat Anti-Rabbit IgG antibody (green, bs-60295G-BF488) at 37°C for 90 min, DAPI (blue, C02-04002) was used to stain the cell nuclei. PBS instead of the primary antibody was used as the blank control.

muscle Actin Antibody, Unconjugated (bs-10196R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (Red, bs-0295G-BF594), DAPI (blue, C02-04002) was used to stain the cell nuclei.

muscle Actin Antibody, Unconjugated (bs-10196R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (Red, bs-0295G-BF594), DAPI (blue, C02-04002) was used to stain the cell nuclei.



The NIH/3T3 treated with 5 ng/mL TGF-β1 for 72h (M) 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):Rabbit Anti-alpha smooth muscle Actin antibody (bs-10196R,1:100); Isotype Control (orange): Rabbit IgG (bs-0295P). Blank control (black): PBS. Acquisition of 20,000 events was performed.



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):Rabbit Anti-alpha smooth muscle Actin antibody (bs-10196R,1:100); Isotype Control (orange): Rabbit IgG (bs-0295P). Blank control (black): PBS. 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=16]** Hao Ling. et al. Biomimetic Selenium-Encrusted Prussian Blue Nanozyme for Myocardial Infarction by Coordinated Enhancement of Mitophagy and Reactive Oxygen Species Scavenging. ACS NANO. 2026 Feb IHC ;Rat. 41665146
- **[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=14.6]** Mengyao Zhang. et al. Intercellular communication interference through energy metabolism-related exosome secretion inhibition for liver fibrosis treatment. ACTA PHARM SIN B. 2025 Jul;: IF ;Mouse. 10.1016/j.apsb.2025.07.008
- **[IF=14.593]** Binbin He. et al. 3D printed biomimetic epithelium/stroma bilayer hydrogel implant for corneal regeneration. BIOACT MATER. 2022 Nov;17:234 IF ;Rabbit. 10.1016/j.bioactmat.2022.01.034