

## Anti-ACTA2 Antibody (6K554)

### Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat (predicted:Chicken)
Molecular Weight:	Theoretical: 42 kDa. Actual: 42 kDa.
Clone:	6K554
Purification:	Protein G purified

### Applications

#### Verified Activity:

1. Paraformaldehyde-fixed, paraffin embedded (rat colon); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (ascites of TMAB-00045) at 1:2000 overnight at 4°C, followed by operating according to SP Kit (Mouse) instructions and DAB staining.
2. Blank control: NIH/3T3. Primary Antibody (green line): Mouse Anti-alpha smooth muscle Actin antibody (TMAB-00045)  
Dilution: 1 µg/Test;  
Secondary Antibody: Goat anti-mouse IgG-FITC  
Dilution: 0.5 µg/Test.  
Protocol  
The cells were fixed with 4% PFA (10 min 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.
3. Paraformaldehyde-fixed, paraffin embedded (rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Mouse) instructions and DAB staining.
4. Paraformaldehyde-fixed, paraffin embedded (mouse stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Mouse) instructions and DAB staining.
5. Paraformaldehyde-fixed, paraffin embedded (mouse uterus); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Mouse) instructions and DAB staining.
6. Paraformaldehyde-fixed, paraffin embedded (rat uterus); Antigen retrieval by boiling in

sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Mouse) instructions and DAB staining.

7. Paraformaldehyde-fixed, paraffin embedded (human colon carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Mouse) instructions and DAB staining.

8. Paraformaldehyde-fixed, paraffin embedded (Human uterus); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (alpha smooth muscle Actin) Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Mouse) instructions and DAB staining.

9. Paraformaldehyde-fixed, paraffin embedded Mouse Colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green), DAPI (blue) was used to stain the cell nucleus.

10. Paraformaldehyde-fixed, paraffin embedded Human Colon; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green), DAPI (blue) was used to stain the cell nucleus.

11. Paraformaldehyde-fixed, paraffin embedded Rat Stomach; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green), DAPI (blue) was used to stain the cell nucleus.

12. Paraformaldehyde-fixed, paraffin embedded Mouse Stomach; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green), DAPI (blue) was used to stain the cell nucleus.

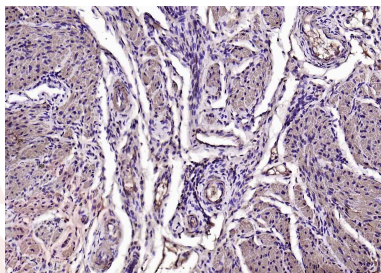
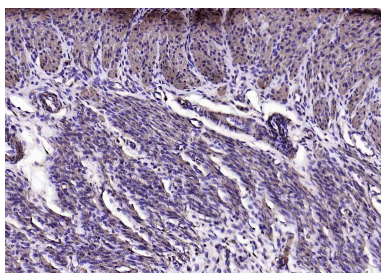
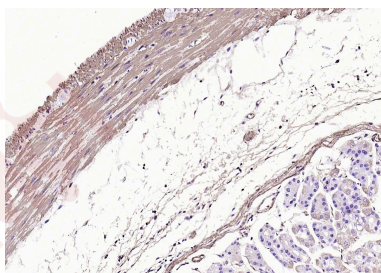
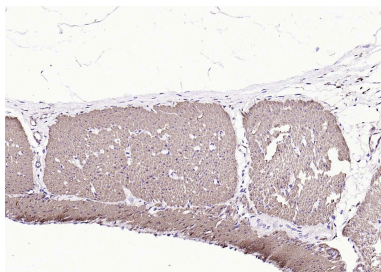
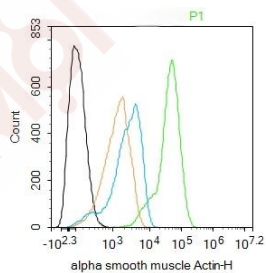
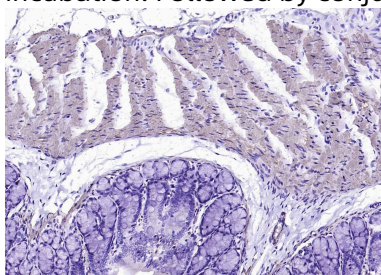
13. Paraformaldehyde-fixed, paraffin embedded Human Stomach; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green), DAPI (blue) was used to stain the cell nucleus.

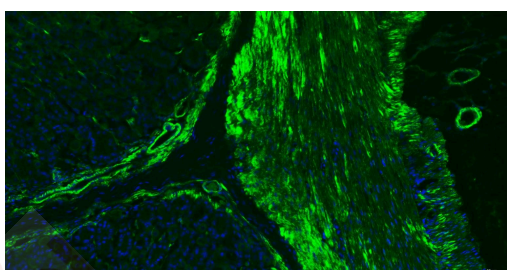
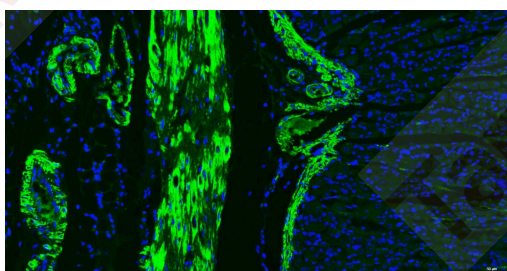
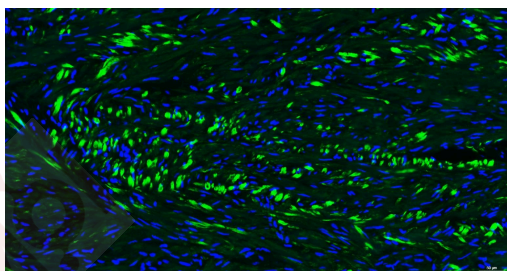
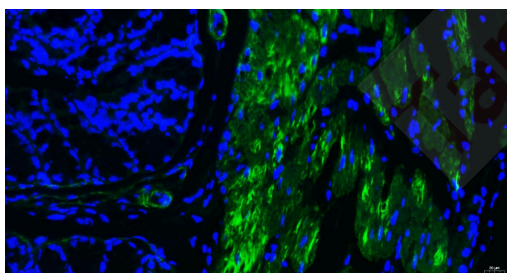
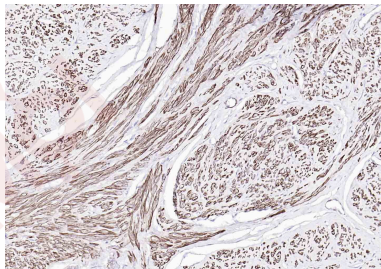
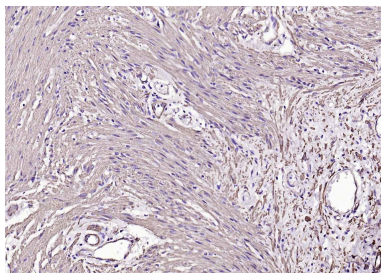
14. Paraformaldehyde-fixed, paraffin embedded Human Uterus; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green), DAPI (blue) was used to stain the cell nucleus.

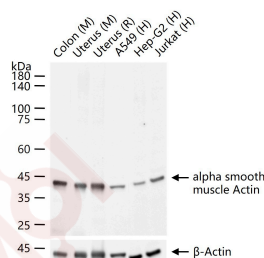
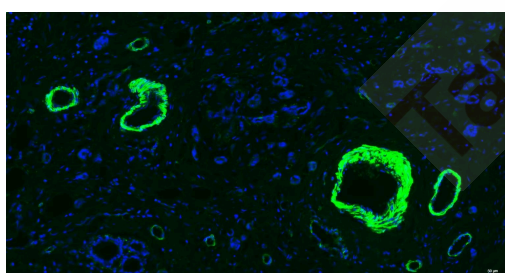
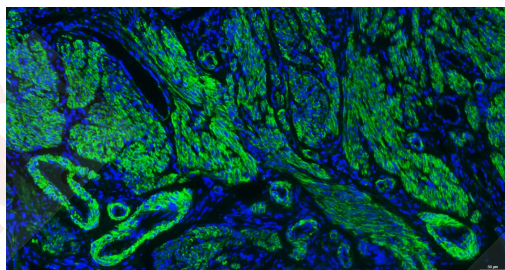
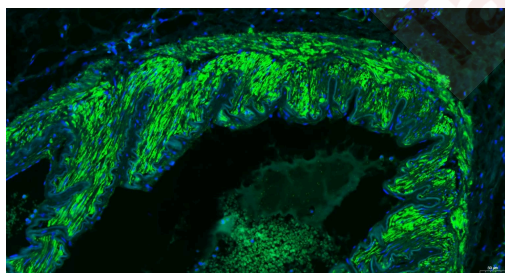
15. Paraformaldehyde-fixed, paraffin embedded Human Breast Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with alpha smooth muscle Actin Monoclonal Antibody, Unconjugated (TMAB-00045) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Mouse IgG antibody (green), DAPI (blue) was used to stain the cell nucleus.

16. 25 µg total protein per Lane of various lysates probed with alpha smooth muscle Actin

monoclonal antibody, unconjugated (TMAB-00045) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at RT for 60 min.







Application: FCM, ICC/IF, IHC-Fr, IHC-P, WB

Recommended: FCM=1 µg/Test; ICC/IF=1:100-500; IF=1:200-500; IHC-Fr=1:200-500; IHC-P=1:200-500; WB=1:1000-5000

### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

### Antigen Details

Immunogen: KLH conjugated synthetic peptide: human Actin alpha

Antigen Species: Human

Gene ID: 59

Uniprot ID: P62736

Synonyms: aortic smooth muscle; Actin, aortic smooth muscle; ACTA2; ACTVS; Alpha-actin-2; Cell growth-inhibiting gene 46 protein; ACTSA

Biology Area: Myogenesis, Mesoderm, Actin, alpha smooth muscle Actin, Mesoderm, Arterial, Cytoskeleton, Actins, Smooth Muscle Cells

### Research 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.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481