α-Smooth Muscle Actin Antibody

**Applications**
- Western
- IP—Immunoprecipitation
- IHC—Immunohistochemistry
- ChIP—Chromatin Immunoprecipitation
- IF—Immunofluorescence
- F—Flow cytometry
- E-P—ELISA-Peptide

**Species Cross-Reactivity**
- H—human
- M—mouse
- R—rat
- Hm—hamster
- Mk—monkey
- Mi—mink
- C—chicken
- Dm—D. melanogaster
- X—Xenopus
- Z—zebrafish
- B—bovine
- Dg—dog
- Pg—pig
- Sc—S. cerevisiae
- Ce—C. elegans
- Hr—Horse
- All—all species expected

Species enclosed in parentheses are predicted to react based on 100% homology.

**Important:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® at 4°C with gentle shaking, overnight.

**Background:** Actin proteins are major components of the eukaryotic cytoskeleton. At least six vertebrate actin isoforms have been identified. The cytoplasmic β- and γ-actin proteins are referred to as "non-muscle" actin proteins as they are predominantly expressed in non-muscle cells where they control cell structure and motility (1). The α-cardiac and α-skeletal actin proteins are expressed in striated cardiac and skeletal muscles, respectively. The smooth muscle α-actin and γ-actin proteins are found primarily in vascular smooth muscle and enteric smooth muscle, respectively. The α-smooth muscle actin (ACTA2) is also known as aortic smooth muscle actin. These actin isoforms regulate the contractile potential of muscle cells (1).

**Specificity/Sensitivity:** α-Smooth Muscle Actin Antibody recognizes endogenous levels of total α-smooth muscle actin protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human α-smooth muscle actin protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

**Recommended Antibody Dilutions:**
- Western blotting: 1:1000

**Storage:**
- Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C.
- Do not aliquot the antibody.

**Species cross-reactivity is determined by western blot.**

**Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**
- Western blotting: 1:1000

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

**Western Blot Analysis:**
Western blot analysis of extracts from various tissue using α-Smooth Muscle Actin Antibody (upper) and GAPDH (D16H11) XP® Rabbit mAb #5174 (lower). As expected, α-skeletal muscle extracts are negative for smooth muscle actin.

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