

Store at
-20°C

#48938

α -Smooth Muscle Actin (1A4) Mouse mAb (IF Formulated)

Cell Signaling
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orders@cellsignal.comEntrez-Gene ID #59
UniProt ID #P62736

New 06/17

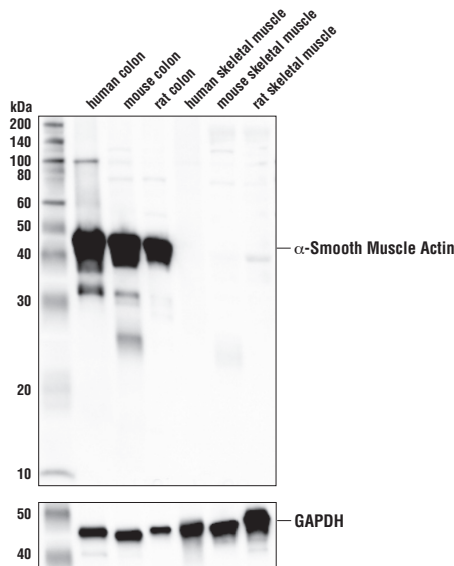
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Applications
W, IP, IF-F
EndogenousSpecies Cross-Reactivity*
H, M, RMolecular Wt.
45 kDaIsotype
Mouse IgG2a**

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 (1A4) Mouse mAb (IF Formulated) recognizes endogenous levels of total α -smooth muscle actin protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human α -smooth muscle actin protein.



Western blot analysis of extracts from various tissues using α -Smooth Muscle Actin (1A4) Mouse mAb (IF Formulated) (upper) and GAPDH (D16H11) XP® Rabbit mAb #5174 (lower). As expected, skeletal muscle samples are negative for α -smooth muscle actin.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

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

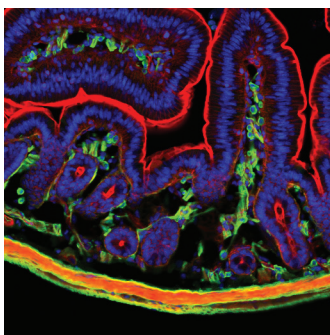
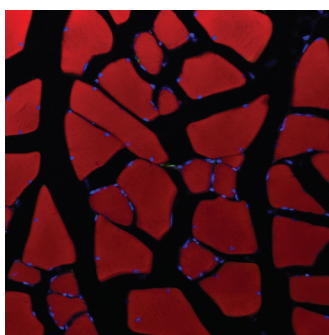
Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:200
Immunofluorescence (IF-F)	1:200

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

Background References:

(1) Herman, I.M. (1993) *Curr Opin Cell Biol* 5, 48-55.

Small Intestine**Skeletal Muscle**

◀ Confocal immunofluorescent analysis of mouse small intestine (left) or skeletal muscle (right) using α -Smooth Muscle Actin (1A4) Mouse mAb (IF Formulated) (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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Applications: W—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.