Store at 4°C

#46469

α-Smooth Muscle Actin (1A4) Mouse mAb (Alexa Fluor® 488 Conjugate)

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Entrez-Gene ID #59
UniProt ID #P62736

New 10/17

For Research Use Only. Not For Use In Diagnostic Procedures.

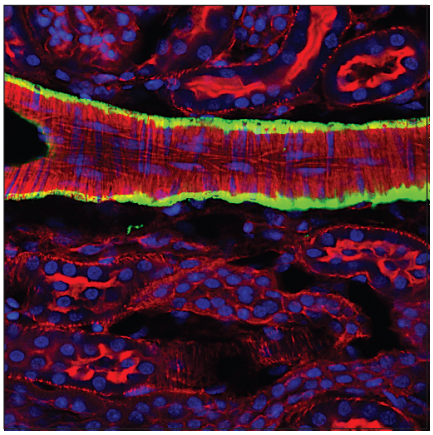
Applications	Species Cross-Reactivity*	Isotype
IF-F	H, M, R	Mouse IgG2a
Endogenous		

Description: This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct immuno fluorescence analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated α-Smooth Muscle Actin (1A4) Mouse mAb #56856.

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 (Alexa Fluor® 488 Conjugate) 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 protein.



Confocal immunofluorescent analysis of a blood vessel in mouse kidney using α-Smooth Muscle Actin (1A4) Mouse mAb (Alexa Fluor® 488 Conjugate) (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Storage: Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. *Do not aliquot the antibody. Protect from light. Do not freeze.*

***Species cross-reactivity is determined by western blot using the unconjugated antibody.**

Recommended Antibody Dilutions:

Immunofluorescence (IF-F)	1:50

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.

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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.