

#19245 Store at -20°C

 **$\alpha$ -Smooth Muscle Actin (D4K9N)  
XP® Rabbit mAb****Cell Signaling**  
TECHNOLOGY®**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com  
cellsignal.com

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, W-S, IP, IHC-Bond, IHC-P, IF-F	H M R Hm Mk	Endogenous	42	Rabbit IgG	#P62736	59

**Product Usage  
Information****Application**

Western Blotting  
Simple Western™  
Immunoprecipitation  
IHC Leica Bond  
Immunohistochemistry (Paraffin)  
Immunofluorescence (Frozen)

**Dilution**

1:1000  
1:10 - 1:50  
1:100  
1:100 - 1:400  
1:320 - 1:1280  
1:200 - 1:800

**Storage**

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

For a carrier free (BSA and azide free) version of this product see product #50513.

**Specificity / Sensitivity**

$\alpha$ -Smooth Muscle Actin (D4K9N) XP® Rabbit mAb recognizes endogenous levels of total  $\alpha$ -smooth muscle protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human  $\alpha$ -smooth muscle actin protein.

**Background**

Actin proteins are major components of the eukaryotic cytoskeleton. At least six vertebrate actin isoforms have been identified. The cytoplasmic  $\beta$ - and  $\gamma$ -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  $\alpha$ -cardiac and  $\alpha$ -skeletal actin proteins are expressed in striated cardiac and skeletal muscles, respectively. The smooth muscle  $\alpha$ -actin and  $\gamma$ -actin proteins are found primarily in vascular smooth muscle and enteric smooth muscle, respectively. The  $\alpha$ -smooth muscle actin (ACTA2) is also known as aortic smooth muscle actin. These actin isoforms regulate the contractile potential of muscle cells (1).

**Background References**

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

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

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

**Applications Key**

**WB:** Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond  
**IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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