

#63902 Store at -20°C**α-Smooth Muscle Actin (D4K9N) & CO-0024-647 SignalStar™ Oligo-Antibody Pair**

1 Kit (10 slides)

UniProt ID:
#P62736Entrez-Gene Id:
#59**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Item #	Volume	Reactivity	Isotype
α-Smooth Muscle Actin (D4K9N) XP® Rabbit mAb (SignalStar™ Conjugate 0024)	71159	50 µl	H M R	Rabbit IgG
Complementary Oligo (CO-0024-647)	65864	22 µl		

Storage

SignalStar conjugates are supplied in PBS (pH 7.2), less than 0.1% sodium azide, 2 mM EDTA, 0.05% Triton X-100, 2 mg/mL BSA, and 50% glycerol. Complementary oligos are supplied in nuclease-free water. Store at -20°C. *Do not aliquot the antibody.* All components in this kit are stable for at least 12 months when stored at the recommended temperature.

Description

SignalStar multiplex immunohistochemistry (IHC) is an advanced technology for labeling multiple proteins simultaneously in tissue samples using specific primary antibodies and fluorescent detection reagents. This technology offers accuracy and reliability in visualizing and analyzing protein expression while maintaining spatial context and tissue architecture.

SignalStar Oligo-Antibody Pairs are compatible with the SignalStar Multiplex IHC Buffer Kits for use in fluorescent multiplex imaging experiments. This product includes the oligo-conjugated antibodies and complementary oligos required for labeling your target protein on up to 10 slides. SignalStar Multiplex IHC Buffer Kits are required to amplify and image the target signal. Multiple oligo-antibody pairs can be conveniently combined into a multiplex panel using the SignalStar Multiplex IHC Panel Builder. SignalStar Multiplex IHC Kits & Reagents are not compatible with all of Cell Signaling Technology® products and protocols that are recommended for use in immunohistochemical assays.

Specificity/Sensitivity

α-Smooth Muscle Actin (D4K9N) XP® Rabbit mAb (SignalStar™ Conjugate 0024) recognizes endogenous levels of total α-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 α-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 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).

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).

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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