

Recombinant Human Actin, Alpha 2, Smooth Muscle, Aorta, His-tagged

Cat. No. ACTA2-7151H **Lot. No.** (See product label)

SPECIFICATION

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|-------------------------|--|
| Product Overview | Recombinant human ACTA2 protein, fused to His-tag at N-terminus, was expressed in <i>E. coli</i> and purified by using conventional chromatography techniques. MW: 44.4 kDa. |
| Species | Human |
| Source | <i>E. coli</i> |
| ProteinLength | 3-377aa |
| Description | ACTA2 belongs to the actin family of proteins, which are highly conserved proteins that play a role in cell motility, structure and integrity. Alpha, beta and gamma actin isoforms have been identified, with alpha actins being a major constituent of the contractile apparatus, while beta and gamma actins are involved in the regulation of cell motility. This actin is an alpha actin that is found in skeletal muscle. Defects in this gene cause aortic aneurysm familial thoracic type 6. Multiple alternatively spliced variants, encoding the same protein, have been identified. |
| Form | Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 10% glycerol |
| Molecular Mass | 44.4 kDa (400aa), confirmed by MALDI-TOF |
| AA Sequence | MGSSHHHHHH SGLVPRGSH MGSHEEEDS TALVCDNGSG LCKAGFAGDD APRAVFPISV GRPRHQGMV GMGQKDSYVG DEAQSKRGIL TLKYPIEHGI |

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ITNWDDMEKI WHHSFYNELR VAPEEHPTLL TEAPLNPKAN REKMTQIMFE
 TFNVPAMYVA IQAVLSLYAS GRITGIVLDS GDGVTHNVPI YEGYALPHAI
 MRDLAGRDL TDYLMKILTE RGYSFVTTAE REIVRDIKEK LCYVALDFEN
 EMATAASSSS LEKSYELPDG QVITIGNERF RCPETLFQPS FIGMESAGIH
 ETTYNSIMKC DIDIRKDLYA NNVLSGGTTM YPGIADRMQK EITALAPSTM
 KIKIIPPER KYSVWIGGSI LASLSTFQQM WISKQEYDEA GPSIVHRKCF

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|----------------------|--|
| Purity | >85% by SDS - PAGE |
| Applications | SDS-PAGE |
| Storage | Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles. |
| Concentration | 1 mg/ml (determined by Bradford assay) |

GENE INFORMATION

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|------------------------|---|
| Gene Name | ACTA2 actin, alpha 2, smooth muscle, aorta [Homo sapiens] |
| Official Symbol | ACTA2 |
| Synonyms | ACTA2; actin, alpha 2, smooth muscle, aorta; actin, aortic smooth muscle; ACTSA; alpha 2 actin; alpha-actin-2; alpha-cardiac actin; growth-inhibiting gene 46; cell growth-inhibiting gene 46 protein; AAT6; MYMY5; |
| Gene ID | 59 |
| mRNA Refseq | NM_001141945 |
| Protein Refseq | NP_001135417 |

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| | |
|----------------------------|---|
| MIM | 102620 |
| UniProt ID | P62736 |
| Chromosome Location | 10q22-q24 |
| Pathway | Muscle contraction, organism-specific biosystem; Myometrial Relaxation and Contraction Pathways, organism-specific biosystem; Smooth Muscle Contraction, organism-specific biosystem; Striated Muscle Contraction, organism-specific biosystem; Vascular smooth muscle contraction, organism-specific biosystem; Vascular smooth muscle contraction, conserved biosystem; |
| Function | ATP binding; nucleotide binding; |

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