

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

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

SPECIFICATION

Product Overview	Recombinant human ACTA2 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques. MW: 44.4 kDa.
Species	Human
Source	E.coli
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 SSGLVPRGSH MGSHEEEEDS TALVCDNGSG LCKAGFAGDD APRAVFPSIV GRPRHQGVMMV GMGQKDSYVG DEAQSKRGIL TLKYPIEHGI

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ITNWDDMEKI WHHSFYNELR VAPEEHPTLL TEAPLNPKAN REKMTQIMFE
TFNVPAMYVA IQAVLSLYAS GRTTGIVLDS GDGVTHNVPI YEGYALPHAI
MRLDLAGRDL TDYLMKILTE RGYSFVTAE REIVRDIKEK LCYVALDFEN
EMATAASSSS LEKSYELPDG QVITIGNERF RCPETLFQPS FIGMESAGIH
ETTYNSIMKC DIDIRKDLA NNVLSGGTTM YPGIADRMQK EITALAPSTM
KIKIIPPER KYSVWIGGSI LASLSTFQQM WISKQEYDEA GPSIVHRKCF

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

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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