

# Recombinant Human Tropomyosin 1 (Alpha), His-tagged

Cat. No. TPM1-2789H Lot. No. (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant human TPM1 protein (1-284aa), fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	1-284 a.a.
<b>Description</b>	TPM1 is a member of the tropomyosin family of highly conserved, widely distributed actin-binding proteins involved in the contractile system of striated and smooth muscles and the cytoskeleton of non-muscle cells. Tropomyosin is composed of two alpha-helical chains arranged as a coiled-coil. It is polymerized end to end along the two grooves of actin filaments and provides stability to the filaments. TPM1 is one type of alpha helical chain that forms the predominant tropomyosin of striated muscle, where it also functions in association with the troponin complex to regulate the calcium-dependent interaction of actin and myosin during muscle contraction.
<b>Sequences</b>	<p>MGSSHHHHHH SSGLVPRGSH MDAIKKKMQM LKLDKENALD RAEQAEADKK  AAEDRSKQLE DELVSLQKKL KGTEDELDKY SEALKDAQEK LELAEEKKATD  AEADVASLNR RIQLVEEELD RAQERLATAL QKLEEAEKAA DESERGMKVI  ESRAQKDEEK MEIQEIQLKE AKHIAEDADR KYEEVARKLV IIESDLERAE  ERAELSEGVV RQLEEQLRIM DQTLKALMAA EDKYSQKEDR YEEEIKVLSD  KLKEAETRAE FAERSVTKLE KSIDDLEDEL YAQKLKYKAI SEELDHALND MTSM.</p>

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<b>Form</b>	Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 0.1M NaCl, 1mM DTT.
<b>Molecular Weight</b>	35.0 kDa (304aa), confirmed by MALDI-TOF.
<b>Purity</b>	> 90% by SDS – PAGE.
<b>Concentration</b>	0.5 mg/ml (determined by Bradford assay).
<b>Storage</b>	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.

## GENE INFORMATION

<b>Gene Name</b>	TPM1 tropomyosin 1 (alpha) [ Homo sapiens ]
<b>Synonyms</b>	TPM1; tropomyosin 1 (alpha); alpha tropomyosin; alpha-tropomyosin; cardiomyopathy, hypertrophic 3; sarcomeric tropomyosin kappa; tropomyosin alpha-1 chain; tropomyosin-1; TMSA; CMD1Y; C15orf13; HTM-alpha
<b>Gene ID</b>	7168
<b>mRNA Refseq</b>	NM_000366
<b>Protein Refseq</b>	NP_000357
<b>MIM</b>	191010
<b>UniProt ID</b>	P09493
<b>Chromosome Location</b>	15q22.1

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<b>Pathway</b>	Cardiac muscle contraction; Dilated cardiomyopathy; Hypertrophic cardiomyopathy (HCM); Muscle contraction
<b>Function</b>	<a href="#">actin binding</a> ; <a href="#">structural constituent of cytoskeleton</a> ; structural constituent of muscle

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