

Recombinant Human Tropomyosin 1 (Alpha), His-tagged

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

SPECIFICATION

Product Overview	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.
Species	Human
Source	E.coli
ProteinLength	1-284 a.a.
Description	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.
Sequences	MGSSHHHHH SSGLVPRGSH MDAIKKKMQM LKLDKENALD RAEQAEADKK AAEDRSKQLE DELVSLQKKL KGTEDELDKY SEALKDAQEK LELAEEKATD AEADVASLNR RIQLVEEELD RAQERLATAL QKLEEAEEKAA DESERGMKVI ESRAQKDEEK MEIQEIQKE AKHIAEDADR KYEEVARKLV IIESDLERAE ERAELSEGQV RQLEEQLRIM DQTLKALMAA EDKYSQKEDR YEEEIKVLSD KLKEAETRAE FAERSVTKE KSIDDLEDEL YAQKLKYKAI SEELDHALND MTSM.

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

GENE INFORMATION

Gene Name	TPM1 tropomyosin 1 (alpha) [Homo sapiens]
Synonyms	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
Gene ID	7168
mRNA Refseq	NM_000366
Protein Refseq	NP_000357
MIM	191010
UniProt ID	P09493
Chromosome Location	15q22.1

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Pathway

Cardiac muscle contraction; Dilated cardiomyopathy; Hypertrophic cardiomyopathy (HCM); Muscle contraction

Function

actin binding; structural constituent of cytoskeleton; structural constituent of muscle

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