

# Recombinant Human Tropomyosin 4, His-tagged

**Cat. No.** TPM4-6899H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human TPM4 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques. MW: 30.7 kDa.                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>ProteinLength</b>    | 1-248aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | TPM4 belongs to the tropomyosin family. Tropomyosins are present in virtually all eukaryotic cells (both muscle and nonmuscle), where they bind actin filaments and function to modulate actin-myosin interaction and stabilize actin filament structure. TPM4 binds to actin filaments in muscle and nonmuscle cells and plays a central role, in association with the troponin complex, in the calcium dependent regulation of vertebrate striated muscle contraction. Smooth muscle contraction is regulated by interaction with caldesmon. |
| <b>Form</b>             | Liquid. In 20mM Tris-HCl buffer(pH 8.0) containing 10% glycerol, 2mM DTT, 0.1M NaCl.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Molecular Mass</b>   | 30.7 kDa (268aa), confirmed by MALDI-TOF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>AA Sequence</b>      | MGSSHHHHHH SSGLVPRGSH MAGLNSLEAV KRKIQALQQQ ADEAEDRAQG<br>LQRELDGERE RREKAEGDVA ALNRRIQLVE EELDRAQERL ATALQKLEEA<br>EKAADESERG MKVIENRAMK DEEKMEIQEM QLKEAKHIAE EADRYEEVA                                                                                                                                                                                                                                                                                                                                                                      |

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RKLVILEGEL ERAEERA EVS ELKCGDLEEE LKNVTNNLKS LEAASEKYSE  
 KEDKYEEIEIK LLSDKLKEAE TRAEFAERTV AKLEKTIDDL EEKLAQAKEE  
 NVGLHQTLTDQ TLNELNCI

**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** [TPM4 tropomyosin 4 \[ Homo sapiens \]](#)

**Official Symbol** TPM4

**Synonyms** TPM4; tropomyosin 4; tropomyosin alpha-4 chain; TM30p1; tropomyosin-4;

**Gene ID** [7171](#)

**mRNA Refseq** [NM\\_001145160](#)

**Protein Refseq** [NP\\_001138632](#)

**MIM** [600317](#)

**UniProt ID** [P67936](#)

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chromosome Location</b> | 19p13.1                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Pathway</b>             | Cardiac muscle contraction, organism-specific biosystem; Cardiac muscle contraction, conserved biosystem; Dilated cardiomyopathy, organism-specific biosystem; Dilated cardiomyopathy, conserved biosystem; Hypertrophic cardiomyopathy (HCM), organism-specific biosystem; Hypertrophic cardiomyopathy (HCM), conserved biosystem; Muscle contraction, organism-specific biosystem; |
| <b>Function</b>            | actin binding; calcium ion binding; structural constituent of muscle;                                                                                                                                                                                                                                                                                                                |