9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

TPM1 Human

Tropomyosin-1 Human Recombinant
RCP2417

Product Overview

Name	TPM1 Human
Description	
Tropomyosin-1 Human Recombinant	
Accession (Primary)	P09493
Synonyms	
Tropomyosin alpha-1 chain, Tropomyosin-1, Alpha-tropomyosin, TPM1, C15orf13, TMSA, CMD1Y, HTM-alpha.	
Introduction	
TPM1 is a member of the tropomyosin family which consists of a number of extremely conserved, extensively distributed 35-45 kDa actin-binding proteins that are involved in the contractile system of striated and smooth muscles and the cytoskeleton of non-muscle cells. Tropomyosin-1 is composed of 2 alpha-helical chains arranged as a coiled-coil. TPM1 is polymerized end to end alongside the two grooves of actin filaments and provides stability to the filaments. TPM1 binds to actin filaments in muscle and non-muscle cells. TPM1 also functions in association with the troponin complex to regulate the calcium-dependent interaction of actin and myosin during muscle contraction. In non-muscle cells TPM1 is implicated in stabilizing cytoskeleton actin filaments. Smooth muscle contraction is controlled by interaction with caldesmon. Alternatively spliced transcript variants encoding a range of isoforms have been described in smooth muscle and non-muscle cells. TPM1 Isoform 1 is expressed in adult and fetal skeletal muscle and cardiac tissues, with higher expression levels in the cardiac tissues, whereas Isoform 10 is expressed in adult and fetal cardiac tissues, but not in skeletal muscle. Mutations in the TPM1 gene are linked to type 3 familial hypertrophic cardiomyopathy.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered clear solution.	
Formulation	
TPM1 0.5mg/ml protein solution contains 20mM Tris-HCl buffer pH-8, 1mM DTT, 0.1M NaCl & 20% glycerol.	
Stability	
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.	

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Purity

Greater than 90.0% as determined by SDS-PAGE.

Amino acid sequence

MGSSHHHHHH SSGLVPRGSH MDAIKKKMQM LKLDKENALD RAEQAEADKK AAEDRSKQLE DELVSLQKKL KGTEDELDKY SEALKDAQEK LELAEKKATD AEADVASLNR RIQLVEEELD RAQERLATAL QKLEEAEKAA DESERGMKVI ESRAQKDEEK MEIQEIQLKE AKHIAEDADR KYEEVARKLV IIESDLERAE ERAELSEGQV RQLEEQLRIM DQTLKALMAA EDKYSQKEDR YEEEIKVLSD KLKEAETRAE FAERSVTKLE KSIDDLEDEL YAQKLKYKAI SEELDHALND MTSM.

Precautions

TPM1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P09493)