

TPM3 Protein, Human

Cat. No.:	HY-P71083
Synonyms:	Tropomyosin Alpha-3 Chain; Gamma-Tropomyosin; Tropomyosin-3; Tropomyosin-5; hTM5; TPM3
Species:	Human
Source:	E. coli
Accession:	P06753-2 (M1-M248)
Gene ID:	7170
Molecular Weight:	Approximately 20.0 kDa

PROPERTIES

AA Sequence	<pre> MAGITTTIEAV KRKIQVLQQQ ADDAEERAER LQREVEGERR AREQAEEAEVA SLNRRIQLVE EELDRAQERL ATALQKLEEA EKAADESERG MKVIENRALK DEEKMELQEI QLKEAKHIAE EADRKYEEVA RKLVIIEGDL ERTEERAELA ESRCREMDEQ IRLMDQNLKCC LSAEEKYSQ KEDKYEEEIK ILTDKLEKEE TRAEFAERSV AKLEKTIDDL EDKLEKCTKEE HLCTQRMLDQ TLLDLNEM </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>The TPM3 protein, a member of the tropomyosin family, exhibits versatile functions in binding to actin filaments both in muscle and non-muscle cells. In conjunction with the troponin complex, TPM3 plays a central role in the calcium-dependent regulation of striated muscle contraction in vertebrates. Its involvement in smooth muscle contraction is mediated through interaction with caldesmon. Beyond muscle-related functions, TPM3 is implicated in stabilizing actin filaments within the cytoskeleton of non-muscle cells. Structurally, TPM3 forms homodimers and heterodimers, combining with alpha (TPM1,</p>
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TPM3, or TPM4) and beta (TPM2) chains. Additionally, TPM3 interacts with TMOD1, further contributing to its multifaceted role in modulating actin dynamics across various cellular contexts.

Caution: Product has not been fully validated for medical applications. For research use only.

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