abcam

Product datasheet

Recombinant Human Tropomyosin 3 protein ab173022

Description

Product name	Recombinant Human Tropomyosin 3 protein
Purity	> 95 % SDS-PAGE. Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE.
Endotoxin level	< 1.000 Eu/µg
Expression system	Escherichia coli
Accession	**P06753-2**
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MAGITTIEAVKRKIQVLQQQADDAEERAERLQREVEGERR AREQAEAEVA SLNRRIQLVEEELDRAQERLATALQKLEEAEKAADESERG MKVIENRALK DEEKMELQEIQLKEAKHIAEEADRKYEEVARKLVIIEGDLE RTEERAELA ESRCREMDEQIRLMDQNLKCLSAAEEKYSQKEDKYEEEI KILTDKLKEAE TRAEFAERSVAKLEKTIDDLEDKLKCTKEEHLCTQRMLDQ TLLDLNEM
Predicted molecular weight	29 kDa
Amino acids	1 to 248

Specifications

Our **Abpromise guarantee** covers the use of **ab173022** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	HPLC SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.40 Constituent: 100% PBS Supplied as a 0.2 µm Ø filtered solution.

General Info

Function	Binds to actin filaments in muscle and non-muscle cells. 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. In non-muscle cells is implicated in stabilizing cytoskeleton actin filaments.
Involvement in disease	Defects in TPM3 are the cause of nemaline myopathy type 1 (NEM1) [MIM:609284]. A form of nemaline myopathy with autosomal dominant or recessive inheritance. Nemaline myopathies are muscular disorders characterized by muscle weakness of varying severity and onset, and abnormal thread-or rod-like structures in muscle fibers on histologic examination. Autosomal dominant nemaline myopathy type 1 is characterized by a moderate phenotype with onset between birth and early second decade of life. Weakness is diffuse and symmetric with slow progression often with need for a wheelchair in adulthood. The autosomal recessive form has onset at birth with moderate-to-severe hypotonia and diffuse weakness. In the most severe cases, death can occur before 2 years. Less severe cases have delayed major motor milestones, and these patients may walk, but often need a wheelchair before 10 years. Defects in TPM3 are a cause of thyroid papillary carcinoma (TPC) [MIM:188550]. TPC is a common tumor of the thyroid that typically arises as an irregular, solid or cystic mass from otherwise normal thyroid tissue. Papillary carcinomas are malignant neoplasm characterized by the formation of numerous, irregular, finger-like projections of fibrous stroma that is covered with a surface layer of neoplastic epithelial cells. Note=A chromosomal aberration involving TPM3 is found in thyroid papillary carcinomas. A rearrangement with NTRK1 generates the TRK fusion transcript by fusing the amino end of isoform 2 of TPM3 to the 3'-end of NTRK1.
Sequence similarities	Belongs to the tropomyosin family.
Domain	The molecule is in a coiled coil structure that is formed by 2 polypeptide chains. The sequence exhibits a prominent seven-residues periodicity.
Cellular localization	Cytoplasm > cytoskeleton.

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