abcam

Product datasheet

Anti-Tropomyosin 3 antibody ab224355

3 Images

Overview

Product name	Anti-Tropomyosin 3 antibody
Description	Rabbit polyclonal to Tropomyosin 3
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Cow
Immunogen	Recombinant fragment corresponding to Human Tropomyosin 3 aa 1-200. The immunogen is also a 100% match to isoforms 3 and 6. Database link: **P06753-2** Run BLAST with Run BLAST with
Positive control	WB: THP-1, NIH/3T3 and NBT-II cell lysates. IHC-P: Human skeletal muscle tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.02% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab224355 in the following tested applications.

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

Application	Abreviews	Notes
WB		Use a concentration of 0.04 - 0.4 µg/ml. Predicted molecular weight: 33 kDa.
IHC-P		1/50 - 1/200. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

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.

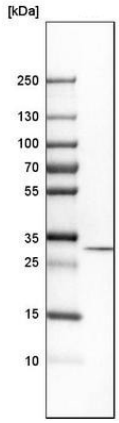
Involvement in disease Defects in TPM3 are the cause of nemaline myopathy type 1 (NEM1) [MIM:609284]. A form of nemaline myopathy with autosomal dominant or recessive inheritance. Nemaline myopathies are muscular disorders characterized by muscle weakness of varying severity and onset, and abnormal thread-or 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.

Images

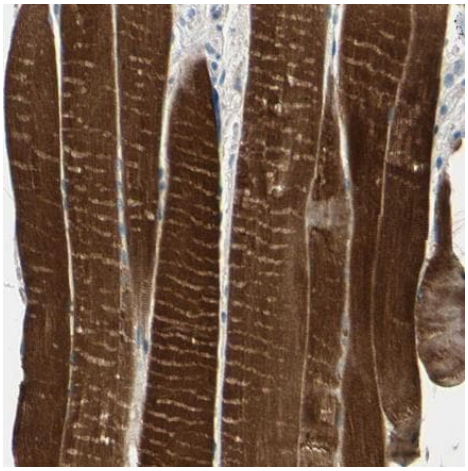


Western blot - Anti-Tropomyosin 3 antibody (ab224355)

Anti-Tropomyosin 3 antibody (ab224355) at 1/100 dilution + THP-1 (human monocytic leukemia cell line) cell lysate

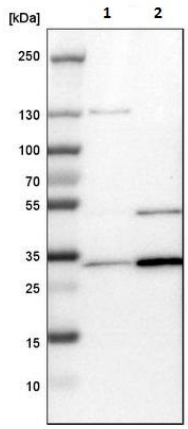
Developed using the ECL technique.

Predicted band size: 33 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tropomyosin 3 antibody (ab224355)

Paraffin-embedded human skeletal muscle tissue stained for Tropomyosin 3 using ab224355 at 1/50 in immunohistochemical analysis.



Western blot - Anti-Tropomyosin 3 antibody (ab224355)

All lanes : Anti-Tropomyosin 3 antibody (ab224355) at 1/100 dilution

Lane 1 : NIH/3T3 (mouse embryonic fibroblast cell line) cell lysate
Lane 2 : NBT-II cell lysate

Developed using the ECL technique.

Predicted band size: 33 kDa

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