

Rabbit TPM1 Polyclonal Antibody | anti-TPM1 antibody

TPM1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326070	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

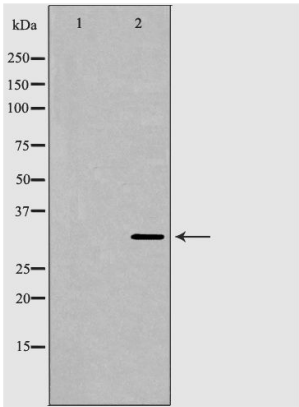
PRODUCT SYNONYMS

TPM1; Polyclonal Antibody; TPM1 Antibody; AA986836; AI854628; Alpha tropomyosin; alpha-TM; Alpha-tropomyosin; C15orf13; cardiomyopathy; hypertrophic 3; CMD1Y; CMH3; HTM alpha; HTM-alpha; OTTHUMP00000163688; sarcomeric tropomyosin kappa; TM2; Tmpa; TMSA; Tpm-1; TPM1_HUMAN; tropomyosin 1 (alpha); tropomyosin 1 (alpha) isoform 1; tropomyosin 1 (alpha) isoform 2; tropomyosin 1 (alpha) isoform 3; tropomyosin 1 (alpha) isoform 4; tropomyosin 1 (alpha) isoform 5; tropomyosin 1 (alpha) isoform 6; tropomyosin 1 (alpha) isoform 7; Tropomyosin 1; Tropomyosin alpha 1 chain; Tropomyosin alpha-1 chain; Tropomyosin; skeletal muscle alpha; Tropomyosin-1; anti-TPM1 antibody

PRODUCT SPECIFICATIONS

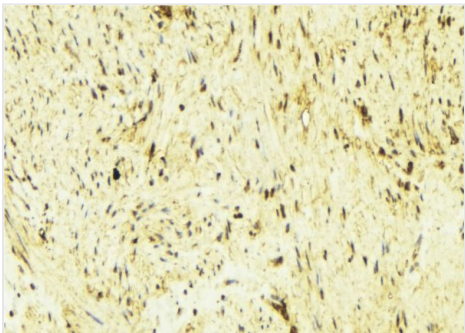
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	TPM1 antibody detects endogenous levels of total TPM1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	284
Applicable Applications for anti-TPM1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human TPM1
Subcellular Location	Cytoplasm > Cytoskeleton.
Tissue Specificity	Detected in primary breast cancer tissues but undetectable in normal breast tissues in Sudanese patients. Isoform 1 is expressed in adult and fetal skeletal muscle and cardiac tissues, with higher expression levels in the cardiac tissues. Isoform 10 is expressed in adult and fetal cardiac tissues, but not in skeletal muscle.
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (92%), Zebrafish (100%), Bovine (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (92%), Xenopus (83%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of Hepg2 whole cell lysates, using TPM1 Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326070 at 1/100 staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-TPM1 antibody

Description: Tropomyosin-1 (TPM1) belongs to the high molecular weight members of tropomyosin family (1, 2). The protein exists in an alpha-helical coiled-coil conformation and binds multiple acting monomers in a tight manner to stabilize and regulate the actin filament (3). Tropomyosins fulfill functions in muscle and non-muscle cells. In muscle cells, tropomyosins associate with the troponin complex and play a central role in the calcium-dependent regulation of striated muscle contraction in vertebrates. In non-muscle cells, tropomyosins are implicated in the formation and stabilization of cytoskeletal actin filaments to ensure normal cellular processes (1, 2). Mutations of tropomyosin-1 have been reported as a cause of dilated cardiac myopathies (4). Tropomyosin-1 also functions as a tumor suppressor, and many malignant tumors demonstrate downregulation of tropomyosin-1 expression (5-8). Tropomyosin-1 is phosphorylated at Ser283 through the Erk/DAPK pathway, which promotes stress fiber formation in response to oxidative stress (9-10).

Function: Binds to actin filaments in muscle and non-muscle cells (PubMed:23170982). Plays a central role, in association with the troponin complex, in the calcium dependent regulation of vertebrate striated muscle contraction (PubMed:23170982). Smooth muscle contraction is regulated by interaction with caldesmon. In non-muscle cells is implicated in stabilizing cytoskeleton actin filaments.

Subunit Structure: Homodimer (PubMed:23170982). Heterodimer of an alpha (TPM1, TPM3 or TPM4) and a beta (TPM2) chain (By similarity). Interacts with HRG (via the HRR domain); the interaction contributes to the antiangiogenic properties of the histidine/proline-rich region (HRR) of HRG (By similarity). Interacts (via N-terminus) with LMOD2 (via N-terminus) and TMOD1 (via N-terminus) (PubMed:26873245).

Post-translational Modifications: Phosphorylated at Ser-283 by DAPK1 in response to oxidative stress and this phosphorylation enhances stress fiber formation in endothelial cells.

Similarity: The molecule is in a coiled coil structure that is formed by 2 polypeptide chains. The sequence exhibits a prominent seven-residues periodicity. Belongs to the tropomyosin family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	27597085
NCBI GeneID	7168
NCBI Accession #	NP_000357.3
NCBI GenBank Nucleotide #	NM_000366.5
UniProt Accession #	P09493; P09494; P10469; Q6DV89; Q6DV90; Q7Z6L8; Q86W64; Q96IK2; B7Z5T7; D9YZV2; D9YZV3; D9YZV8
Molecular Weight	Observed: 33 kDa Predicted: 33 kDa
NCBI Official Full Name	tropomyosin alpha-1 chain isoform Tpm1.5cy
NCBI Official Synonym Full Names	tropomyosin 1

NCBI Official Symbol	TPM1
NCBI Official Synonym Symbols	CMH3; TMSA; CMD1Y; LVNC9; C15orf13; HEL-S-265; HTM-alpha
NCBI Protein Information	tropomyosin alpha-1 chain
UniProt Protein Name	Tropomyosin alpha-1 chain
UniProt Gene Name	TPM1
UniProt Synonym Gene Names	C15orf13; TMSA

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/tpm1-antibody-immunohistochemistry-western-blot-elisa/326070>