

TPM4 (tropomyosin)

Identity

Hugo [TPM4](#)
 Location 19p13.1

DNA/RNA

Transcription alternate transcripts

Protein

Description 248 amino acids, 29 kDa. Coiled-coil structure
 Function Tropomyosins are actin-binding proteins; component of cytoskeletal microfilaments; tropomyosins mediate the effect of Ca²⁺ on the myosin-actin interaction In skeletal muscles, but their function in smooth muscles and other tissues is yet unknown
 Homology Other tropomyosins: TPM1 (alpha) located in 15q22, TPM2 (beta), located in 9q13, and [TPM3](#) located in 1q25

Implicated in

Entity [Inflammatory myofibroblastic tumors](#) with t(2;19)(p23;p13.1)
 Disease rare soft tissue tumour found in children and young adults
 Prognosis good prognosis
 Hybrid/Mutated Gene 5' CLTC - 3' [ALK](#)
 Abnormal Protein 221 N-term amino acids from TPM4 fused to the 562 C-term amino acids from ALK (i.e. the entire cytoplasmic portion of ALK with the tyrosine kinase domain); homodimerization of the fusion protein.
 Oncogenesis TPM4-ALK is constitutively activated

External links

Nomenclature

Hugo [TPM4](#)
 GDB [TPM4](#)
 Entrez Gene [TPM4 7171](#) tropomyosin 4

Cards

Atlas [TPM4ID359](#)
 GeneCards [TPM4](#)
 Ensembl [TPM4](#)
 CancerGene [TPM4](#)
 GenAtlas [TPM4](#)
 GeneLynx [TPM4](#)
 eGenome [TPM4](#)
 euGene [7171](#)

Genomic and cartography

GoldenPath [TPM4 - 19p13.1 chr19:16048325-16074408 + 19p13.12](#) (hg17-May_2004)
 Ensembl [TPM4 - 19p13.12 \[CytoView\]](#)
 NCBI [Genes Cyto](#) [Gene Seq](#) [Map View - NCBI]
 OMIM [Disease map \[OMIM\]](#)
 HomoloGene [TPM4](#)

	Gene and transcription		
Genbank	AK023385 [SRS]	AK023385 [ENTREZ]	
Genbank	BC002827 [SRS]	BC002827 [ENTREZ]	
Genbank	BC037576 [SRS]	BC037576 [ENTREZ]	
Genbank	BC067225 [SRS]	BC067225 [ENTREZ]	
Genbank	BT019634 [SRS]	BT019634 [ENTREZ]	
RefSeq	NM_003290 [SRS]	NM_003290 [ENTREZ]	
RefSeq	NT_086897 [SRS]	NT_086897 [ENTREZ]	
AceView	TPM4 AceView - NCBI		
TRASER	TPM4 Traser - Stanford		
Unigene	Hs.466088 [SRS]	Hs.466088 [NCBI]	HS466088 [spliceNest]
	Protein : pattern, domain, 3D structure		
SwissProt	P07226 [SRS]	P07226 [EXPASY]	P07226 [INTERPRO]
CluSTR	P07226		
Blocks	P07226		
	Polymorphism : SNP, mutations, diseases		
OMIM	600317 [map]		
GENECLINICS	600317		
SNP	TPM4 [dbSNP-NCBI]		
SNP	NM_003290 [SNP-NCI]		
SNP	TPM4 [GeneSNPs - Utah]	TPM4 [SNP - CSHL]	TPM4 [HGBASE - SRS]
	General knowledge		
Family Browser	TPM4 [UCSC Family Browser]		
SOURCE	NM_003290		
SMD	Hs.466088		
SAGE	Hs.466088		
Amigo	function actin binding		
Amigo	component cytoskeleton		
Amigo	process muscle development		
PubGene	TPM4		
	Other databases		
	Probes		
Probe	TPM4 Related clones (RZPD - Berlin)		
	PubMed		
PubMed	5 Pubmed reference(s) in LocusLink		
Bibliography			

Recurrent involvement of 2p23 in inflammatory myofibroblastic tumors.

Griffin CA, Hawkins AL, Dvorak C, Henkle C, Ellingham T, Perlman EJ.
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Am J Pathol 2000; 157: 377-384.

Medline [10934142](#)

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Brown JH, Kim KH, Jun G, Greenfield NJ, Dominguez N, Hitchcock-DeGregori SE, Cohen C.

Proc Natl Acad Sci USA 2001; 98: 8496-8501.

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Contributor(s)

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Citation

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URL : <http://www.infobiogen.fr/services/chromcancer/Genes/TPM4ID359.html>

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