

Recombinant Human TTN, GST-tagged

Cat. No. TTN-26H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human TTN(1 a.a. - 305 a.a.), fused with GST-tag at N-terminal, was expressed in wheat germ.
Species	Human
Source	Wheat Germ
Description	This gene encodes a large abundant protein of striated muscle. The product of this gene is divided into two regions, a N-terminal I-band and a C-terminal A-band. The I-band, which is the elastic part of the molecule, contains two regions of tandem immunoglobulin domains on either side of a PEVK region that is rich in proline, glutamate, valine and lysine. The A-band, which is thought to act as a protein-ruler, contains a mixture of immunoglobulin and fibronectin repeats, and possesses kinase activity. An N-terminal Z-disc region and a C-terminal M-line region bind to the Z-line and M-line of the sarcomere, respectively, so that a single titin molecule spans half the length of a sarcomere. Titin also contains binding sites for muscle associated proteins so it serves as an adhesion template for the assembly of contractile machinery in muscle cells. It has also been identified as a structural protein for chromosomes. Alternative splicing of this gene results in multiple transcript variants. Considerable variability exists in the I-band, the M-line and the Z-disc regions of titin. Variability in the I-band region contributes to the differences in elasticity of different titin isoforms and, therefore, to the differences in elasticity of different muscle types. Mutations in this gene are associated with familial hypertrophic cardiomyopathy 9, and autoantibodies to titin are produced in patients with the autoimmune disease

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	scleroderma.
Molecular Mass	59.2 kDa
AA Sequence	MTTQAPTFTQPLQSVVLEGSTATFEAHISGFPVPEVSWFRDQGQVISTSTLPGVQIS FSDGRAKLTIPAVTKANS GRYSLKATNGSGQATSTAELLVKAETAPPNFVQRLQSM TVRQGSQVRLQVRVTGIPTPVVKFYRDGAEIQSSLDF QISQEGDLYSLIAEAYPED SGTYSVNATNSVGRATSTAELLVQGEIEVPAKTKTIVSTAQISESRQTRIEKKI EAH FDARSIATVEMVIDGAAGQQLPHKTPPRIPPKPKSRSPTPPSIAAKAQLARQQSPSP RHSPSPVRHVRAPT PSPVR
Applications	ELISA; WB-Re; AP; Array
Storage	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
GENE INFORMATION	
Gene Name	TTN titin [Homo sapiens]
Official Symbol	TTN
Synonyms	TTN; titin; TMD;CMH9; CMD1G; CMPD4; EOMFC; FLJ32040; FLJ26020; FLJ26409; FLJ34413; FLJ39564;FLJ43066; HMERF; MYLK5; LGMD2J; MPRM; DKFZp451N061; connectin; OTTHUMP00000233809;OTTHUMP00000233810; rhabdomyosarcoma antigen MU-RMS-40.14; cardiomyopathy,dilated 1G (autosomal dominant); EC 2.7.11.1
Gene ID	7273

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mRNA Refseq	NM_003319
Protein Refseq	NP_003310
MIM	188840
UniProt ID	Q8WZ42
Chromosome Location	2q31
Pathway	Dilated cardiomyopathy; Hemostasis; Hypertrophic cardiomyopathy (HCM); Muscle contraction; Platelet activation; Platelet degranulation; Response to elevated platelet cytosolic Ca ²⁺ ;
Function	ATP binding; actin filament binding; alpha-actinin binding; calcium ion binding; calmodulin binding; identical protein binding; muscle alpha-actinin binding; nucleic acid binding; nucleotide binding; protein binding; protein self-association; protein serine/threonine kinase activity; protein tyrosine kinase activity; structural constituent of muscle; telethonin binding