

Recombinant Human Titin

Cat. No. TTN-705H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human TTN contains 6 Immunoglobulin-like domains from the I-band region and can be used as a force and length standard for atomic force spectroscopy.
Species	Human
Source	E.coli
Description	TTN is the largest known protein. Next to actin and myosin, titin is the third most abundant protein in the striated muscle sarcomere, providing passive tension to muscle and acting as a template for sarcomere formation. Titin is important in the contraction of striated muscle tissues. It connects the Z line to the M line in the sarcomere. The protein contributes to force transmission at the Z line and resting tension in the I band region. It limits the range of motion of the sarcomere in tension, thus contributing to the passive stiffness of muscle. Variations in the sequence of titin between different types of muscle have been correlated with differences in the mechanical properties of these muscles.
Form	Liquid. Supplied in 20 mM HEPES-KOH pH 7.0, 50 mM NaCl, 1 mM EDTA and 1 mM DTT.
Purity	>95% by SDS-PAGE
Endotoxin Level	< 0.1 ng/g of protein
Storage	When stored at -80°C, product is stable for 1 year from date of delivery.

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OfficialSymbol TTN

GENE INFORMATION

Gene Name TTN titin [Homo sapiens]

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

mRNA Refseq NM_003319

Protein Refseq NP_003310

MIM 188840

UniProt ID E9PPD3

Chromosome Location 2q31

Pathway Dilated cardiomyopathy;Hemostasis; Hypertrophic cardiomyopathy (HCM); Muscle contraction; Plateletactivation; Platelet degranulation; Response to elevated platelet cytosolicCa²⁺; Striated Muscle Contraction

Function ATP binding; actinfilament binding; alpha-actinin binding; calcium ion binding; calmodulinbinding; identical protein binding; muscle alpha-actinin binding; nucleicacid

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binding; nucleotide binding; protein binding; protein self-association;protein serine/threonine kinase activity; protein tyrosine kinase activity;structural constituent of muscle; telethonin binding

The three-dimensional structure of a type I module from titin. PDB rendering based on 1bpv.

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