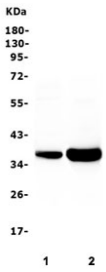
TNNT3 Antibody (RQ5557)

Catalog No.	Formulation	Size
RQ5557	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P45378
Applications	Western Blot : 0.25-0.5ug/ml Direct ELISA : 0.1-0.5ug/ml
Limitations	This TNNT3 antibody is available for research use only.



Western blot testing of 1) rat skeletal muscle and 2) mouse skeletal muscle with TNNT3 antibody. Predicted molecular weight: ~32 kDa, routinely observed at 35~38 kDa.

Description

Fast skeletal muscle troponin T (fTnT) is a protein that in humans is encoded by the TNNT3 gene. It is mapped to 11p15.5. The binding of Ca(2+) to the trimeric troponin complex initiates the process of muscle contraction. Increased Ca(2+) concentrations produce a conformational change in the troponin complex that is transmitted to tropomyosin dimers situated along actin filaments. The altered conformation permits increased interaction between a myosin head and an actin filament which, ultimately, produces a muscle contraction. The troponin complex has protein subunits C, I, and T. Subunit C binds Ca(2+) and subunit I binds to actin and inhibits actin-myosin interaction. Subunit T binds the troponin

complex to the tropomyosin complex and is also required for Ca(2+)-mediated activation of actomyosin ATPase activity. There are 3 different troponin T genes that encode tissue-specific isoforms of subunit T for fast skeletal-, slow skeletal-, and cardiac-muscle. This gene encodes fast skeletal troponin T protein; also known as troponin T type 3. Alternative splicing results in multiple transcript variants encoding additional distinct troponin T type 3 isoforms. A developmentally regulated switch between fetal/neonatal and adult troponin T type 3 isoforms occurs. Additional splice variants have been described but their biological validity has not been established. Mutations in this gene may cause distal arthrogryposis multiplex congenita type 2B (DA2B).

Application Notes

Optimal dilution of the TNNT3 antibody should be determined by the researcher.

Immunogen

A human recombinant protein (amino acids A45-K251) was used as the immunogen for the TNNT3 antibody.

Storage

After reconstitution, the TNNT3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.