

## TNNC1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	TNNC1;Troponin I;CMH7;TNNI3
Protein Construction:	Met1-Glu161
Species:	Human
Expression Host:	E. coli
Accession:	P63316
Molecular Weight:	17-20 KDa (reducing condition)
AA Sequence:	Met1-Glu161

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 10% Glycerol, pH 8.0.

### Preparation and Storage

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

*Actual storage temperature shall be subject to the COA.*

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

Troponin I, also known as TNI, is a 24 kDa component of a protein complex on striated muscle thin filaments. Troponin is the central regulatory protein of striated muscle contraction. Tn consists of three components: Tn-I which is the inhibitor of actomyosin ATPase, Tn-T which contains the binding site for tropomyosin and Tn-C. The binding of calcium to Tn-C abolishes the inhibitory action of Tn on actin filaments. Troponin I inhibits the calcium-dependent muscle contraction mediated by Troponins C and T. The expression of cardiac Troponin I (TNNI3) is restricted to cardiac muscle, while TNNI1 and TNNI2 (encoded by distinct genes) are expressed in skeletal muscle. Mutations of cardiac Troponin I are associated with hereditary cardiomyopathy. Human cardiac Troponin I shares 93% amino acid sequence identity with mouse and rat cardiac Troponin I.

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