

# Native Human TNNI3

**Cat. No.** TNNI3-221H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>    | Native Human TNNI3 was purified from Human cardiac tissue by Tn-C affinity chromatography.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Source</b>              | Human Cardiac                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Description</b>         | Troponin I (TnI), along with troponin T (TnT) and troponin C (TnC), is one of 3 subunits that form the troponin complex of the thin filaments of striated muscle. TnI is the inhibitory subunit; blocking actin-myosin interactions and thereby mediating striated muscle relaxation. The TnI subfamily contains three genes: TnI-skeletal-fast-twitch, TnI-skeletal-slow-twitch, and TnI-cardiac. This gene encodes the TnI-cardiac protein and is exclusively expressed in cardiac muscle tissues. Mutations in this gene cause familial hypertrophic cardiomyopathy type 7 (CMH7) and familial restrictive cardiomyopathy (RCM). |
| <b>Molecular Mass</b>      | 24 KDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Formulation</b>         | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Storage buffer</b>      | 8 M Urea, 50 mM Tris.HCl, 15 mM β-mercaptoethanol, 1 mM EDTA (pH 8.0)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Biological activity</b> | SDS PAGE profile of a typical recombinant Troponin-I preparation (3.8ug) showed a major band at 24kDa and a minor band attributable to Troponin-I dimer. Please note: Troponin-I is very susceptible to proteolytic breakdown within cardiac tissue and it is                                                                                                                                                                                                                                                                                                                                                                       |

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difficult to isolate undegraded native human cardiac troponin-I. This product is greater than 70% intact and hence proteolytic fragments can be observed.

**Storage** Aliquot and store at -80°C. Avoid repeated freeze / thaw cycles.

**OfficialSymbol** TNNI3

## GENE INFORMATION

**Gene Name** TNNI3 troponin I type 3 (cardiac) [ Homo sapiens ]

**Synonyms** TNNI3; troponin I type 3 (cardiac); CMH7; RCM1; cTnI; CMD2A; TNNC1; MGC116817; TNNI3; troponin I, cardiac; Troponin I, cardiac muscle; Cardiac troponin I; familial hypertrophic cardiomyopathy 7

**Gene ID** 7137

**mRNA Refseq** NM\_000363

**Protein Refseq** NP\_000354

**MIM** 191044

**UniProt ID** P19429

**Chromosome Location** 19q13.4

**Pathway** Hypertrophic cardiomyopathy (HCM); Muscle contraction; Cardiac muscle contraction

**Function** actin binding; calcium-dependent protein binding; protein domain specific binding; protein kinase binding; troponin C binding; troponin T binding; calcium channel

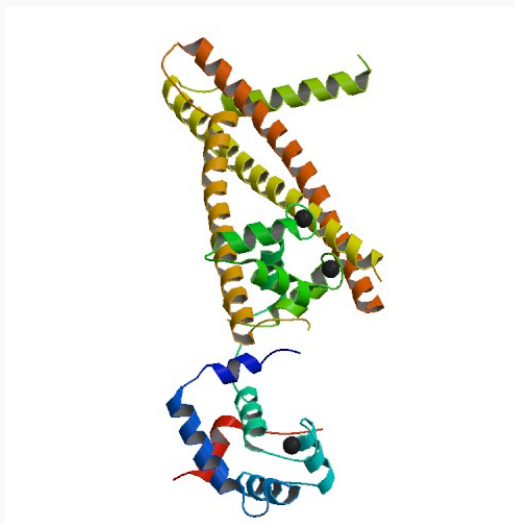
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## inhibitor activity

PDB rendering  
based on 1j1d.



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