

Recombinant Human Cardiac Troponin-I (cTnI)

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. PRO-341
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➤ **Background:**

Cardiac troponin C belongs to the EF-hand superfamily of calcium-binding proteins and plays an essential role in the regulation of muscle contraction and relaxation.

➤ **Description :**

Three troponin I genes have been identified in vertebrates that encode the isoforms expressed in adult cardiac muscle (TNNI3), slow skeletal muscle (TNNI1) and fast skeletal muscle (TNNI2), respectively. Skeletal isoforms of Troponin I were suggested to be used as markers of acute and chronic skeletal muscle injuries.

Recombinant fast skeletal Troponin I is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered colourless liquid formulation.

➤ **Formulation:**

0.5 mg/ml glycerol.

➤ **Stability:**

Recombinant TnI although stable at 10C for 1 week, should be stored desiccated below -18°C.
Please avoid freeze-thaw cycles.

➤ **Purity:**

Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of human TnI.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.

➤ **Gene:**

Name:TNNI2

➤ **Protein synonyms/aliases:**

Troponin I, fast skeletal muscle (Troponin I, fast-twitch isoform).

➤ **Protein Family:**

Belongs to the troponin I family.

➤ **Latest Publications:**

1. Differential pH effect on calcium-induced conformational changes of cardiac troponin C complexed with cardiac and fast skeletal isoforms of troponin I and troponin T.

J Biochem (Tokyo) 2004 Nov;136(5):683-92

2. Identification of a region of fast skeletal troponin T required for stabilization of the coiled-coil formation with troponin I.

J Biol Chem 2005 Jan 7;280(1):538-47

3. Thin-filament-binding domains of cardiac and fast skeletal muscle troponin I isoforms as studied by epitope tagging.

J Muscle Res Cell Motil 1999 Nov;20(8):755-60

4. Structural characterization of the human fast skeletal muscle troponin I gene (TNNI2).

Gene 2000 Jan 25;242(1-2):313-20

5. Assembly of force-expressed troponin-I isoforms in myofibrils of cultured cardiac and fast skeletal muscle cells as studied by epitope tagging.

J Muscle Res Cell Motil 1998 Nov;19(8):937-47

6. Localization of the fast skeletal muscle troponin I gene (TNNI2) to 11p15.5: genes for troponin I and T are organized in pairs.

Ann Hum Genet 1997 Nov;61 (Pt 6):519-23