



# DataSheet

**CATALOGUE #:** 8T53

**PRODUCT NAME:** Human cardiac troponin I (cTnI)

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- Source:** Human heart tissue.  
Blood sample from the tissue donors was tested and found negative for HBsAg, HIV-1 and HIV-2 antibodies, HCV, and syphilis.
- Applications:** TnI is the inhibitory subunit of troponin, the thin filament regulatory complex which confers calcium sensitivity to striated muscle actomyosin ATPase activity.  
TnI exists in three isoforms, one for slow-twitch skeletal muscle, one for fast twitch skeletal muscle and one for cardiac muscle. The amino acid sequences of two skeletal (skTnI) and one cTnI forms show 40% dissimilarity. Furthermore, the human cTnI has additional amino acid residues on its N-terminal region that are not present on the skeletal form, making this protein a promising analyte for indicating cardiac specificity. cTnI follows similar release pattern as CK-MB within the first 15 hours of myocardial infarction (MI), but remains elevated in serum up to 6 days. This observation and the unique amino sequence of cTnI make it an important diagnostic marker of MI.  
TnI is suitable for use as a standard in immunoassay for early detection of MI, immunogen for antiserum production and tracer for iodination.
- Analysis:** Purity > 98 % (SDS-PAGE).  
Immunological activity confirmed by reaction with monoclonal antibody that is specific for the troponin I cardiac isoform in immunoblotting.  
TnI concentration was determined spectrophotometrically using A (0.1 %, 280 nm, 1 cm) equal to 0.42. This coefficient was calculated from the amino composition of human cTnI (FEBS Lett, 270, 57-61).
- Presentation:** Lyophilized from 0.01 M HCl.  
It is recommended to reconstitute this product with Tris/urea buffer (20 mM Tris, pH 7.5, 7 M urea, 5 mM EDTA, 15 mM 2-mercaptoethanol) to a concentration close to 1 mg/ml.  
Solubility is limited at neutral pH and physiological salt concentration.
- Storage:** Lyophilized -20°C (-15 ... -30 °C allowed)  
Reconstituted -70°C (-65 ... -80 °C allowed)
- Other information:** Avoid repeated freezing and thawing. It is recommended to aliquot the product after reconstitution.
- Material safety note:** This product is sold **for research or further manufacturing use only**. Standard Laboratory Practices should be followed when handling this material.

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