

Human Troponin C / TNNC1 Protein

Catalog Number: 11011-HNAE



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

CMD1Z; CMH13; TN-C; TNC; TNNC; AI874626; cTnC; cTnl; TnC; tncc

Protein Construction:

A DNA sequence encoding the human TNNC1 (NP_003271.1) (Met1-Glu161) was expressed and purified.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 21

Molecular Mass:

The recombinant human TNNC1 consists of 161 amino acids and has a predicted molecular mass of 18.4 kDa. The apparent molecular mass of it is approximately 20 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 150 mM NaCl, 10 mM Na₂HPO₄, pH 7.5.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

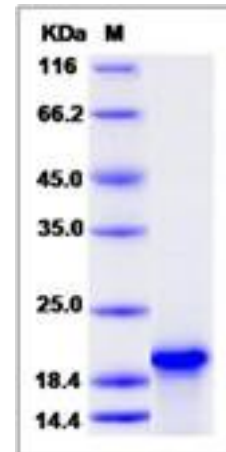
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Troponin I, also known as TNNC1, is part of the troponin complex. This complex contains 3 subunits: troponin I (TnI), troponin T (TnT) and troponin C (TnC). Troponin I is the inhibitory subunit, blocking actin-myosin interactions and thereby mediating striated muscle relaxation. It binds to actin in thin myofilaments to hold the actin-tropomyosin complex in place. Because of it myosin cannot bind actin in relaxed muscle. When calcium binds to the Troponin C it causes conformational changes which lead to dislocation of troponin I and finally tropomyosin leaves the binding site for myosin on actin leading to contraction of muscle.

References

1. Kalaji FR. et al., 2012, Saudi J Kidney Dis Transpl. 23 (5): 939-45.
2. Wijner PJ. et al., 2013, Am J Physiol Heart Circ Physiol. 304 (2): H260-8.
3. Solaro RJ. et al., 2013, Circ Res. 112 (2): 355-66.

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