

Product Information

Troponin 1, His-tagged, human recombinant, expressed in *E. coli* cells

Catalog Number **SRP5147**

Storage Temperature -70°C

Synonyms: TNNI1, DKFZp451O223, SSTNI, TNN1

Product Description

Troponin 1 is a member of the tropomyosin family and regulates the calcium sensitivity of the myofibril contractile apparatus of striated muscles. Troponin 1 is part of a complex with troponin T and troponin C in which troponin 1 acts as an inhibitory subunit that blocks actin-myosin interactions and thereby, mediates striated muscle relaxation.¹ Troponin 1 is expressed in cardiac and skeletal muscle during early development but is restricted to slow-twitch skeletal muscle fibers in adults. The troponin 1 protein prevents muscle contraction by inhibiting calcium-mediated conformational changes in actin-myosin complexes.²

Recombinant, full-length, human Troponin 1 protein was expressed in *E. coli* cells using an N-terminal His tag. The gene accession number is NM_003281. Recombinant protein stored in 50 mM sodium phosphate, pH 7.0, 300 mM NaCl, 150 mM imidazole, 0.1 mM PMSF, 0.25 mM DTT, and 25% glycerol.

Molecular mass: ~24kDa

Purity: 70–95% (SDS-PAGE, see Figure 1)

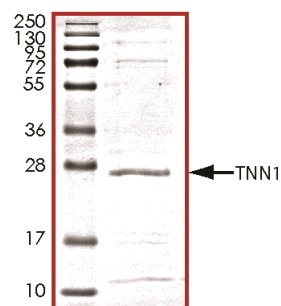
Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at -70°C is recommended. After opening, aliquot into smaller quantities and store at -70°C . Avoid repeated handling and multiple freeze/thaw cycles.

Figure 1.
SDS-PAGE Gel of Typical Lot
70–95% (densitometry)



References

1. Tiso, N. et al., Fine mapping of five human skeletal muscle genes, alpha-tropomyosin, beta-tropomyosin, troponin-I slow-twitch, troponin-I fast-twitch, and troponin-C fast. *Biochem. Biophys. Res. Commun.*, **230**, 347-350 (1997).
2. Nadal-Ginard, B. et al., Molecular basis of cardiac performance, plasticity of the myocardium generated through protein isoform switches. *J. Clin. Invest.*, **84**, 1693-1700 (1989).

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