

Troponin Subunits

Purified Troponin Subunits

Product
Troponin C
Troponin I
Troponin T

Source Rabbit Skeletal Muscle Human Cardiac Muscle Human Cardiac Muscle **Purity** ≥95% ≥95% >95%

PURIFIED TROPONIN SUBUNITS

The troponin complex of cardiac and skeletal muscle is a group of contractile proteins composed of three non-identical subunits. Troponin C (TnC) is the calcium sensitive subunit and contains four Ca2+ binding sites. Troponin I (TnI), the inhibitory subunit, binds actin in the relaxed state, thereby preventing muscle contraction by inhibiting the ATPase activity of actomyosin. Troponin T (TnT) is involved in the attachment of the troponin complex to the thin filament, binding tropomyosin and actin. The binding of intracellular Ca2+ by TnC induces a conformational change in the troponin complex, which causes Tnl to release actin, subsequently allowing actin to interact with myosin, resulting in muscle contraction. Each subunit of the troponin complex exists in various isoforms depending on its tissue origin.

Elevated serum levels of the cardiac isoforms of the troponin subunits are well-documented in myocardial infarction (MI). Evidence suggests that the subunits exist as the binary Troponin IC complex and as the complete Troponin ICT complex in the serum of MI patients. As such, immunoassays specific for cardiac isoforms must detect these complexes.

The Scripps troponin subunits are stable and lot-to-lot consistency is excellent.



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> Technical Product Summary TPS-TroponinSubunits-R3