

Product datasheet for **AP26440SU-N**

Tnni3 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	Western blot: 1/2000 (although higher dilutions can sometimes be used as cardiac troponin I expression is quite high in cardiac muscle).
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	Ig
Clonality:	Polyclonal
Immunogen:	Fusion protein of the mouse cardiac troponin I holoprotein
Specificity:	Specific for the ~25k cardiac troponin I protein.
Formulation:	State: Serum State: Liquid unpurified neat serum
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	troponin I, cardiac 3
Database Link:	Entrez Gene 21954 Mouse P48787



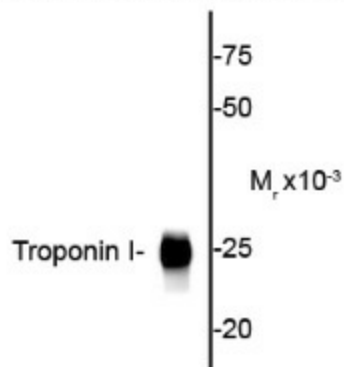
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Background:

Troponin I (cTnI) is 1 of 3 subunits, along with troponin C (TnC) and troponin T (TnT) of troponin complex found in cardiac muscle. cTnI binds to actin in thin myofilaments to hold the troponin-tropomyosin complex in place. Phosphorylation of cardiac isoform of TnI at serines 22,23 in the unique amino-terminal end molecule decreases the calcium sensitivity of the sarcomere, promotes calcium dissociation from troponin C and by extension enhances rates of cross-bridge cycling and diastolic relaxation (Noland, Jr. et al., 1995; Noland et al., 1989). In addition, studies using reconstituted fibers and mutational analysis have shown that PKC phosphorylation of TnI (largely at Ser43) inhibits the actin-cross bridge reaction and reduces the Ca⁺⁺ dependent actomyosin ATPase rate as well as the calcium sensitivity of force generation (Noland, Jr. and Kuo, 1991). Phosphorylation at Thr144 (mediated by several PKC isoforms) reduces maximal tension development and cross-bridge cycling rates (Sumandea et al., 2008). Importantly, changes in the phosphorylation at each of these sites have been shown to be stage-specific with regard to cardiac disease progression (Walker et al., 2010).

Synonyms:

TNNI3, TNNC1

Product images:**Anti-Troponin I (cardiac)**

Western blot of 20 ug of mouse heart lysate showing specific immunolabeling of the ~25k cardiac troponin I protein.