

ARG52452 anti-Cardiac Troponin I antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Cardiac Troponin I
Tested Reactivity	Ms, Rat
Tested Application	WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Cardiac Troponin I
Species	Mouse
Immunogen	Fusion protein of complete Mouse Cardiac Troponin I.
Conjugation	Un-conjugated
Alternate Names	RCM1; cTnI; Cardiac troponin I; TNNC1; CMD1FF; CMD2A; Troponin I, cardiac muscle; CMH7

Application Instructions

Application table	Application	Dilution
	WB	1:2,000

Application Note WB: although higher dilutions can sometimes be used as cardiac troponin I expression is quite high in cardiac muscle. Specific for the ~25k cardiac troponin I protein.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Neat Serum
Buffer	Neat serum
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links [GeneID: 21954 Mouse](#)

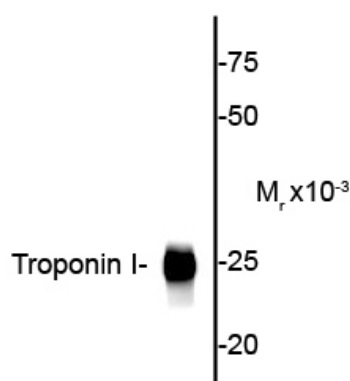
[GeneID: 29248 Rat](#)

[Swiss-port # P23693 Rat](#)

[Swiss-port # P48787 Mouse](#)

Gene Symbol	TNNI3
Gene Full Name	troponin I, cardiac 3
Background	<p>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).</p>
Research Area	Cell Biology and Cellular Response antibody; Controls and Markers antibody; Developmental Biology antibody; Signaling Transduction antibody
Calculated Mw	24 kDa
PTM	Phosphorylated at Ser-42 and Ser-44 by PRKCE; phosphorylation increases myocardium contractile dysfunction (By similarity). Phosphorylated at Ser-23 and Ser-24 by PRKD1; phosphorylation reduces myofilament calcium sensitivity. Phosphorylated preferentially at Thr-31. Phosphorylation by STK4/MST1 alters its binding affinity to TNNC1 (cardiac Tn-C) and TNNT2 (cardiac Tn-T).

Images



ARG52452 anti-Cardiac Troponin I antibody WB image

Western blot: 20 ug of Mouse heart lysate showing specific immunolabeling of the ~25k cardiac troponin I protein stained with ARG52452 anti-Cardiac Troponin I antibody.