# Anti-Cardiac Troponin T Antibody [5-C7]

# M1302-1

| | |
|---|---|
| **Product Type:** | Mouse monoclonal IgG2b, primary antibodies |
| **Species reactivity:** | Human, Mouse |
| **Applications:** | WB, IF-Cell, IHC-P, FC |
| **Molecular Wt:** | Predicted band size: 36 kDa |
| **Clone number:** | 5-C7 |

**Description:** Troponin, working in conjunction with tropomyosin, functions as a molecular switch, regulating muscle contraction in response to changes in the intracellular Ca2+ concentration. Troponin consists of three subunits: the Ca2+-binding subunit troponin C (TnC), the tropomyosin-binding subunit troponin T (TnT), and the inhibitory subunit troponin I (TnI).Troponin T type 2 (cTnT,TNNT2) is a cardiac troponin T isoform expressed in the human heart, that is essential for calcium-regulated myofibrillar ATPase activity. Assays for measuring serum concentrations of cTnT, as well as cTnI, have been reported for analyzing cardiac injury.

**Immunogen:** Synthetic peptide within human TNNT2 50-100 aa.

**Positive control:** Human heart tissue lysate, SK-Br-3, mouse heart tissue.

**Subcellular location:** Cytosol.

**Database links:** SwissProt: P45379 Human | P50752 Mouse

**Recommended Dilutions:**

| | |
|---|---|
| **WB** | 1:2,000-1:5,000 |
| **IF-Cell** | 1:50-1:200 |
| **IHC-P** | 1:50-1:200 |
| **FC** | 1:50-1:100 |

**Storage Buffer:** 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

**Purity:** Immunogen affinity purified.

## Images

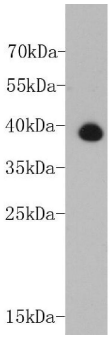


**Fig1:** Western blot analysis of TNNT2 on human heart tissue lysate using anti-TNNT2 antibody at 1/2,000 dilution.

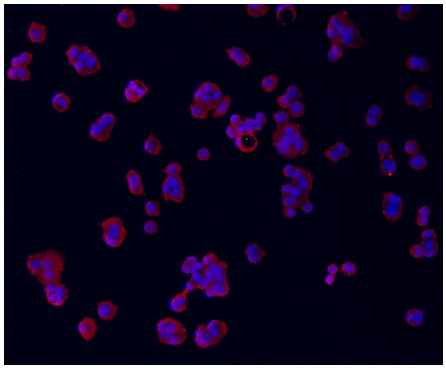

**Fig2:** ICC staining TNNT2 (red) in SK-Br-3 cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

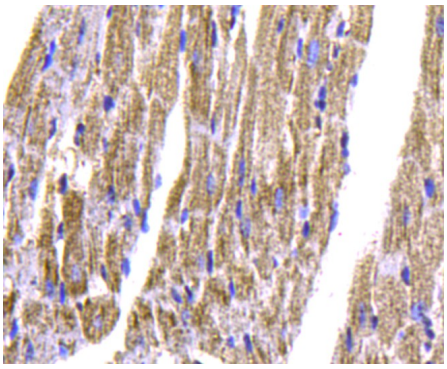

**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse heart tissue using anti-TNNT2 antibody. Counter stained with hematoxylin.

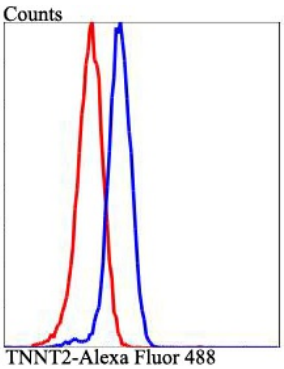


**Fig4:** Flow cytometric analysis of SK-Br-3 cells with TNNT2 antibody at 1/100 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Alexa Fluor 488-conjugated goat anti-mouse IgG was used as the secondary antibody.

## Background References

1. Gerull B et al. A rapid protocol for cardiac troponin T gene mutation detection in familial hypertrophic cardiomyopathy. Hum Mutat 11:179-182 (1998).
2. Thierfelder L et al. Alpha-tropomyosin and cardiac troponin T mutations cause familial hypertrophic cardiomyopathy: a disease of the sarcomere. Cell 77:701-712 (1994).