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TNNC1 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a full length recombinant TNNC1.
Catalog # AT4291a

Product Information

Application	WB, IHC, E
Primary Accession	P63316
Other Accession	BC030244
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG1 kappa
Clone Names	1F8-A9
Calculated MW	18403

Additional Information

Gene ID	7134
Other Names	Troponin C, slow skeletal and cardiac muscles, TN-C, TNNC1, TNNC
Target/Specificity	TNNC1 (AAH30244, 1 a.a. ~ 161 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IHC~~1:100~500 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	TNNC1 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

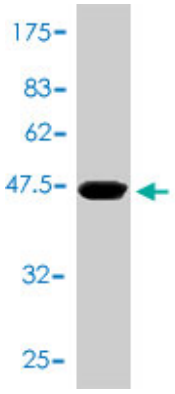
Troponin is a central regulatory protein of striated muscle contraction, and together with tropomyosin, is located on the actin filament. Troponin consists of 3 subunits: TnI, which is the inhibitor of actomyosin ATPase; TnT, which contains the binding site for tropomyosin; and TnC, the protein encoded by this gene. The binding of calcium to TnC abolishes the inhibitory action of TnI, thus allowing the interaction of actin with myosin, the hydrolysis of ATP, and the generation of tension. Mutations in this gene are associated with cardiomyopathy dilated type 1Z.

References

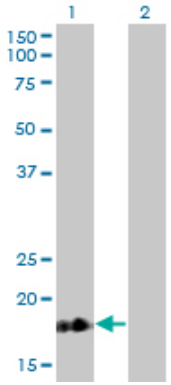
Hypertrophic cardiomyopathy-linked mutation D145E drastically alters calcium binding by the C-domain of

cardiac troponin C. Swindle N, et al. Biochemistry, 2010 Jun 15. PMID 20459070.Circulating immunoreactive cardiac troponin forms determined by gel filtration chromatography after acute myocardial infarction. Bates KJ, et al. Clin Chem, 2010 Jun. PMID 20378771.A dilated cardiomyopathy troponin C mutation lowers contractile force by reducing strong myosin-actin binding. Dweck D, et al. J Biol Chem, 2010 Jun 4. PMID 20371872.Coding sequence rare variants identified in MYBPC3, MYH6, TPM1, TNNC1, and TNNI3 from 312 patients with familial or idiopathic dilated cardiomyopathy. Hershberger RE, et al. Circ Cardiovasc Genet, 2010 Apr. PMID 20215591.Effect of calcium-sensitizing mutations on calcium binding and exchange with troponin C in increasingly complex biochemical systems. Tikunova SB, et al. Biochemistry, 2010 Mar 9. PMID 20128626.

Images

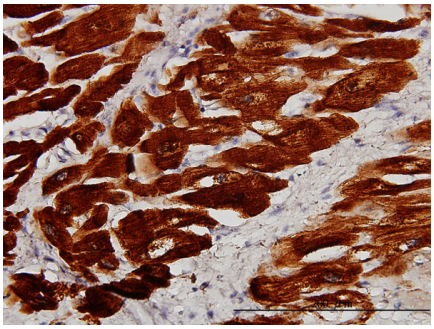


Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (43.45 KDa) .

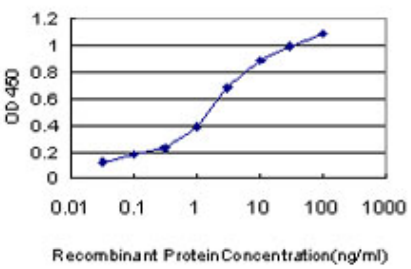


Western Blot analysis of TNNC1 expression in transfected 293T cell line by TNNC1 monoclonal antibody (M01), clone 1F8-A9.

Lane 1: TNNC1 transfected lysate(18.4 KDa).
Lane 2: Non-transfected lysate.



Immunoperoxidase of monoclonal antibody to TNNC1 on formalin-fixed paraffin-embedded human heart. [antibody concentration 3 ug/ml]



Detection limit for recombinant GST tagged TNNC1 is approximately 0.03ng/ml as a capture antibody.