

Datasheet for ABIN2688865
anti-Cardiac Troponin T2 antibody



[Go to Product page](#)

7 Publications

Overview

Quantity:	0.1 mg
Target:	Cardiac Troponin T2 (cTnT)
Reactivity:	Human, Mouse, Rat, Pig, Rabbit, Dog, Chicken, Guinea Pig
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Cardiac Troponin T2 antibody is un-conjugated
Application:	Western Blotting (WB), Intracellular Staining (ICS), Immunohistochemistry (Formalin-fixed Sections) (IHC (f))

Product Details

Brand:	BD Pharmingen™
Immunogen:	Rabbit cardiac troponin T Protein
Clone:	13
Isotype:	IgG1 kappa
Characteristics:	The 13-11 monoclonal antibody specifically recognizes Troponin T type 2 (cardiac), encoded by the gene TNNT2. Troponin T is the tropomyosin-binding subunit of the troponin complex, which also encompasses troponin C and troponin I. This complex regulates muscle contraction in skeletal and cardiac muscle in response to alterations in calcium levels. Troponin T type 2 is solely found in the heart, and genetic alterations in the TNNT2 gene are associated to a series of heart disorders in humans, including hypertrophic cardiomyopathy, dilated cardiomyopathy and left ventricular noncompaction. Cardiac Troponin T can be used as a marker for the

identification of cardiomyocytes derived from pluripotent stem cells. LEFT PANEL: Western blot analysis of Cardiac Troponin T expression in human and mouse tissues. Human heart lysate was obtained from Abcam (Cat .No. ab2943, lane 1). C2C12 mouse myoblasts (ATCC CRL-1772) were cultured in DMEM containing 10 % FBS (lane 2) or 0.5 % FBS for 14 days for induction of cell differentiation (lane 3). Lysates were prepared, electrophoresed (SDS-PAGE) and transferred to PVDF membranes. The membranes were labeled with 1 µg/mL of Purified Mouse Anti-Cardiac Troponin T. Specific staining was detected with HRP Goat Anti-Mouse Ig (Cat. No. 554002). RIGHT PANEL: Immunohistochemical staining of Cardiac Troponin T in human heart. Following antigen retrieval with BD Retrieval A Buffer (Cat. No. 550524), the formalin-fixed paraffin-embedded sections were stained with either Purified Mouse IgG1 κ Isotype Control (Cat. No.550878, left) or Purified Mouse Anti-Cardiac Troponin T (right). A three-step staining procedure that employs Biotin Goat Anti-Mouse Immunoglobulin (Cat. No. 550337), Streptavidin HRP (Cat. No.550946), and the DAB Substrate Kit (Cat. No. 550880) was used to develop the primary staining reagents. Original magnification: 40x. Flow cytometric analysis of Cardiac Troponin T in human (left panel) and mouse (right panel) cardiomyocytes differentiated in vitro. Human embryonic stem cell-derived cardiomyocytes (Evans lab, UCSD) were dissociated and fixed in BD Cytofix™ Fixation Buffer (Cat. No. 554655) and permeabilized with BD Phosflow™ Perm/Wash buffer I (Cat. No. 557885). The C2C12 mouse myoblast cell line (ATCC CRL-1772) was cultured for 5 days in low-serum conditions for induction of cell differentiation, fixed with BD Cytofix™ Fixation Buffer, and permeabilized with BD Perm/Wash™ Buffer (Cat. No. 554723). The cells were stained with either Purified Mouse IgG1, κ Isotype Control (Cat. No. 554121, dashed line) or Purified Mouse Anti-Cardiac Troponin T (solid line). The second-step reagents were FITC Goat Anti-Mouse Ig (Cat. No. 554001, left) and PE Goat Anti-Mouse Ig (Cat. No. 550589, right). Events with the forward and side light-scatter characteristics of intact cells were gated. Flow cytometry was performed on a BD LSR Fortessa™ (left) or a BD FACSCanto™ II (right) flow cytometry system.

BD Pharmingen™ Purified Mouse Anti-Cardiac Troponin T - Purified - Clone 13-11 - Isotype Mouse IgG1, κ - Reactivity Ms, Hu, Chick, Dog, G Pig, Pig, Rab, Rat - 0.1 mg

Purification: The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target: Cardiac Troponin T2 (cTnT)

Alternative Name: Cardiac Troponin T (cTnT Products)

Target Details

Background:	Synonyms: cTnT, Cardiac Muscle Troponin T, Troponin T type 2, TNNT2
Molecular Weight:	35-40 kDa

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤ 0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:	Jáchymová, Muravská, Paleček, Kuchynka, Řeháková, Magage, Kr^{◆◆}, Zima, Horký, Linhart: "Genetic variation screening of TNNT2 gene in a cohort of patients with hypertrophic and dilated cardiomyopathy." in: Physiological research / Academia Scientiarum Bohemoslovaca, Vol. 61, Issue 2, pp. 169-75, (2012) (PubMed). Lian, Hsiao, Wilson, Zhu, Hazeltine, Azarin, Raval, Zhang, Kamp, Palecek: "Robust cardiomyocyte differentiation from human pluripotent stem cells via temporal modulation of canonical Wnt signaling." in: Proceedings of the National Academy of Sciences of the United States of America, Vol. 109, Issue 27, pp. E1848-57, (2012) (PubMed). Uosaki, Fukushima, Takeuchi, Matsuoka, Nakatsuji, Yamanaka, Yamashita: "Efficient and scalable purification of cardiomyocytes from human embryonic and induced pluripotent stem cells by VCAM1 surface expression." in: PLoS ONE, Vol. 6, Issue 8, pp. e23657, (2011) (PubMed).
-------------------	---

Publications

Zhang, Wilson, Soerens, Koonce, Yu, Palecek, Thomson, Kamp: "Functional cardiomyocytes derived from human induced pluripotent stem cells." in: **Circulation research**, Vol. 104, Issue 4, pp. e30-41, (2009) ([PubMed](#)).

Mauritz, Schwanke, Reppel, Neef, Katsirntaki, Maier, Nguemo, Menke, Hausteiner, Hescheler, Hasenfuss, Martin: "Generation of functional murine cardiac myocytes from induced pluripotent stem cells." in: **Circulation**, Vol. 118, Issue 5, pp. 507-17, (2008) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)