

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Troponin I/TNNI3 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 1188B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Peptide 3 Accession # P19429
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

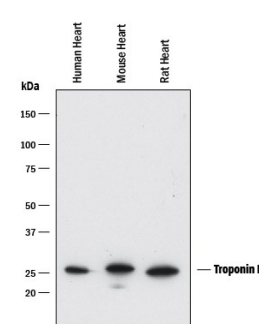
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	See Below
Immunocytochemistry	5-25 µg/mL	See Below
Simple Western	1 µg/mL	See Below

DATA

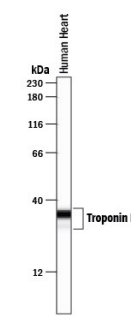
Western Blot



Detection of Human, Mouse, and Rat Troponin I/TNNI3 by Western Blot.

Western blot shows lysates of human heart tissue, mouse heart tissue, and rat heart tissue. PVDF membrane was probed with 0.1 µg/mL of Rabbit Anti-Human Troponin I/TNNI3 Monoclonal Antibody (Catalog # MAB8594) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # Catalog # HAF008). A specific band was detected for Troponin I/TNNI3 at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western

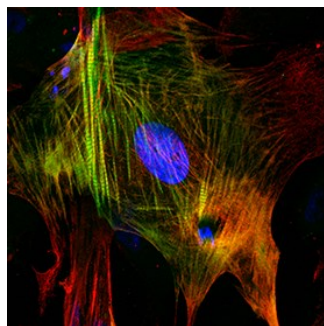


Detection of Human Troponin I/TNNI3 by Simple Western™.

Simple Western lane view shows lysates of human heart tissue, loaded at 0.1 mg/mL. A specific band was detected for Troponin I/TNNI3 at approximately 25-35 kDa (as indicated) using 1 µg/mL of Rabbit Anti-Human Troponin I/TNNI3 Monoclonal Antibody (Catalog # MAB8594). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



Immunocytochemistry



Troponin I/TNNI3 in Human Cardiomyocytes.

Troponin I/TNNI3 was detected in immersion fixed human embryonic stem cells, differentiated into cardiomyocytes using the StemXVivo Cardiomyocyte Differentiation Kit (Catalog # Catalog # SC032), using Rabbit Anti-Human Troponin I/TNNI3 Monoclonal Antibody (Catalog # MAB8594) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 493-conjugated Anti-Rabbit IgG Secondary Antibody (green; Catalog # Catalog # NL006). Cardiac Troponin T was also detected in cardiomyocytes using Mouse Anti-Human Cardiac Troponin T Monoclonal Antibody (Catalog # Catalog # MAB1874). Cells were co-stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # Catalog # NL007) and counterstained with DAPI (blue). Specific staining of Troponin I/TNNI3 was localized to cardiac muscle fibrils. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">• 12 months from date of receipt, -20 to -70 °C as supplied.• 1 month, 2 to 8 °C under sterile conditions after reconstitution.• 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Troponin I, also known as TNI, is a 24 kDa component of a protein complex on striated muscle thin filaments. Troponin I inhibits the calcium-dependent muscle contraction mediated by Troponins C and T. The expression of cardiac Troponin I (TNNI3) is restricted to cardiac muscle, while TNNI1 and TNNI2 (encoded by distinct genes) are expressed in skeletal muscle. Mutations of cardiac Troponin I are associated with hereditary cardiomyopathy. Human cardiac Troponin I shares 93% amino acid sequence identity with mouse and rat cardiac Troponin I.