Highly Sensitive and Specific cTnI Antibody Pair

Meridian Life Science, Inc. offers a new cardiac Troponin-I antibody pair for the development of highly sensitive and specific cTnI sandwich immunoassays. Additional cTnI reagents are also available to complement the development of commercial cardiac troponin diagnostic assays. Please visit www.meridianlifescience.com to view the full range of cardiac products and learn more about Meridian’s 30+ years of experience in manufacturing antigens and antibodies designed for commercial diagnostic assay applications.

INTRODUCTION

The cardiac marker Troponin I (cTnI) is useful for the diagnosis of myocardial infarction (MI) and the risk stratification to help guide the choice of therapeutic options. The cardiac-specific troponins, Troponin-I (cTnI) and Troponin-T (cTnT) are considered the biochemical markers of choice in the evaluation of acute coronary syndromes (ACS). Elevated levels of cTnI in patients have a statistically significant increase in mortality or increases in other non-fatal cardiac events such as non-fatal MI, congestive heart failure, and urgent revascularization.

ANTIBODY PAIRS – request your sample!

**CAPTURE ANTIBODY:** Cat# H86285M
Mab to Troponin I - cardiac, 1 vial containing 0.2mg
Reacts equally with free cardiac troponin I (cTnI) and cTnI forming complexes with other troponin components. Not affected by heparin, phosphorylation, oxidation and troponin complex formation. Recognizes an epitope located between amino acid residues 86 and 90 of cTnI. No cross-reactivity with skeletal muscle troponin I. Reactive with cTnI from rat, mouse or fish. Reactive with cTnI from human, bovine, porcine, goat, canine, rabbit, and feline. Not reactive with cTnI from rat, mouse or fish. Produced in ascites and purified by Protein A chromatography. >90% pure (SDS-PAGE). Concentration: ~7 mg/mL (OD280nm, ε 0.1% = 1.3)

**DETECTION ANTIBODY:** Cat# H01347M
Mab to Troponin I - cardiac, 1 vial containing 0.2mg
Human cardiac Troponin I (24-40 region). Produced in ascites and purified by Protein A chromatography. >95% pure by HPLC. Concentration: ~4 mg/mL (OD280nm, ε 0.1% = 1.3)

SHIPPING & STORAGE
Ship in gel packs, store at 2-8°C

ELISA PROCEDURE - Troponin I - cardiac

**Capture antibody** (Mab to cTnI): Cat# H86285M
**Detection antibody** (Mab to cTnI): Cat# H01347M
**Antigen:** Troponin Complex-Cardiac, Cat# A86862H; 2 mg/mL
Biotinylation: antibody H01347M was biotinylated using standard procedures outlined in the Thermo Fisher EZ-Link Sulfo-NHS-Biotinylation Kit (Cat# 21425). A 1:20 (antibody-to-reagent) dilution was used for the conjugation reaction. Dilution Buffer/Blocking Buffer: 1% BSA in PBST
Wash Buffer: PBST (PBS + 0.05% Tween-20)

1) 100 µL of 1 µg/mL capture antibody solution in carbonate buffer was applied to each well of a 96 well plate.
2) The plate was incubated overnight at 2-8°C.
3) The plate was washed 3x with 300 µL PBST/well, blocked for 1 hour with 300 µL blocking buffer/well, and washed 3x with 300 µL PBST/well.
4) 100 µL of antigen was titrated 2.0-fold for a total of 11 data points. The plate was incubated for 1 hr.
5) The plate was washed 3x with 300 µL PBST/well.
6) 100 µL of biotinylated detection antibody solution was applied to the plate. Dilution varied depending on biotinylated antibody preparation. The plate was incubated 1 hr.
7) The plate was washed 3x with 300 µL PBST/well.
8) Thermo Fisher Streptavidin-poly HRP (Prod # 21140) was diluted 1:10,000 in PBST and 100 µL of the diluted solution was added to each well. The plate was incubated for 1 hr.
9) The plate was washed 3x with 300 µL PBST/well
10) 100 µL of TMB substrate (SurModics Cat#: TMBW-1000-01) was added to the plate and incubated for 10 minutes.
11) 100 µL of 0.16 M Sulfuric Acid solution was added to each well to stop the HRP-TMB reaction.
12) The plate was read at 450 nm using a 96 well plate reader.

Titer Curve with Cat# H86285M as capture antibody and Biotinylated H01347M for detection with cardiac Troponin antigen A86862H. ELISA conditions used: BIO-H01347M 1:2000 and Streptavidin-HRP 1:10000.

![Troponin I - ELISA](image.png)