



## Human IgG1 mAb to cardiac troponin I, clone 10C12

Catalogue #	R1-135-100
Description:	The epitope for clone 10C12 corresponds to the following amino acid (aa) positions in the cTnI protein sequence: 82-94.
Immunogen:	Human cardiac troponin I
Immunogen Description:	Recombinant human cardiac troponin complex protein produced by CHO-based Icosagen Cell factory Ltd. proprietary suspension cell line.
Alternative Names:	CMD1FF, CMD2A, CMH7, RCM1, TNNC1
Uniprot ID:	P19429
Clonality:	Human monoclonal
Clone:	10C12
Class:	hIgG1
Reactivity:	Binds to human cardiac troponin I. Lack of cross-reactivity to skeletal troponin I was confirmed with ELISA using native human skeletal muscle troponin I.
Dissociation constant ( $K_D$ ):	$1.15 \times 10^{-09}$ M (troponin complex binding from solution) 95%
Concentration:	1 mg/ml
Buffer:	PBS, pH 7.4
QC:	Simply Blue Safe stained SDS-PAGE, analytical HPLC-SEC, Octet binding.
Related Products:	Cardiac troponin I antibody clone 10C12 has been identified as a recommended detection antibody pair with clone 5F8 (cat# R1-126-100) and clone 5C1 (cat# R1-121-100), and as a capture antibody with clone 5C1 (cat# R1-121-100) and clone 10G1 (cat# R1-130-100). The antibody pair 5F8-10C12 was additionally validated using serum samples collected from

myocardial infarction (MI) patients.

Shipping:

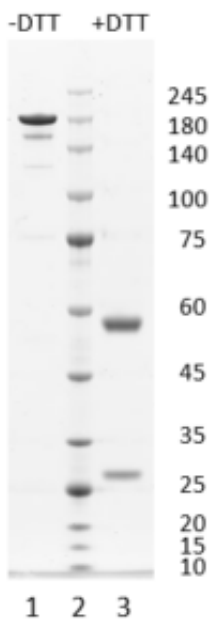
Shipped on dry ice.

Storage:

Store in -65...-85 °C. Avoid multiple freeze-thaw cycles.

Background:

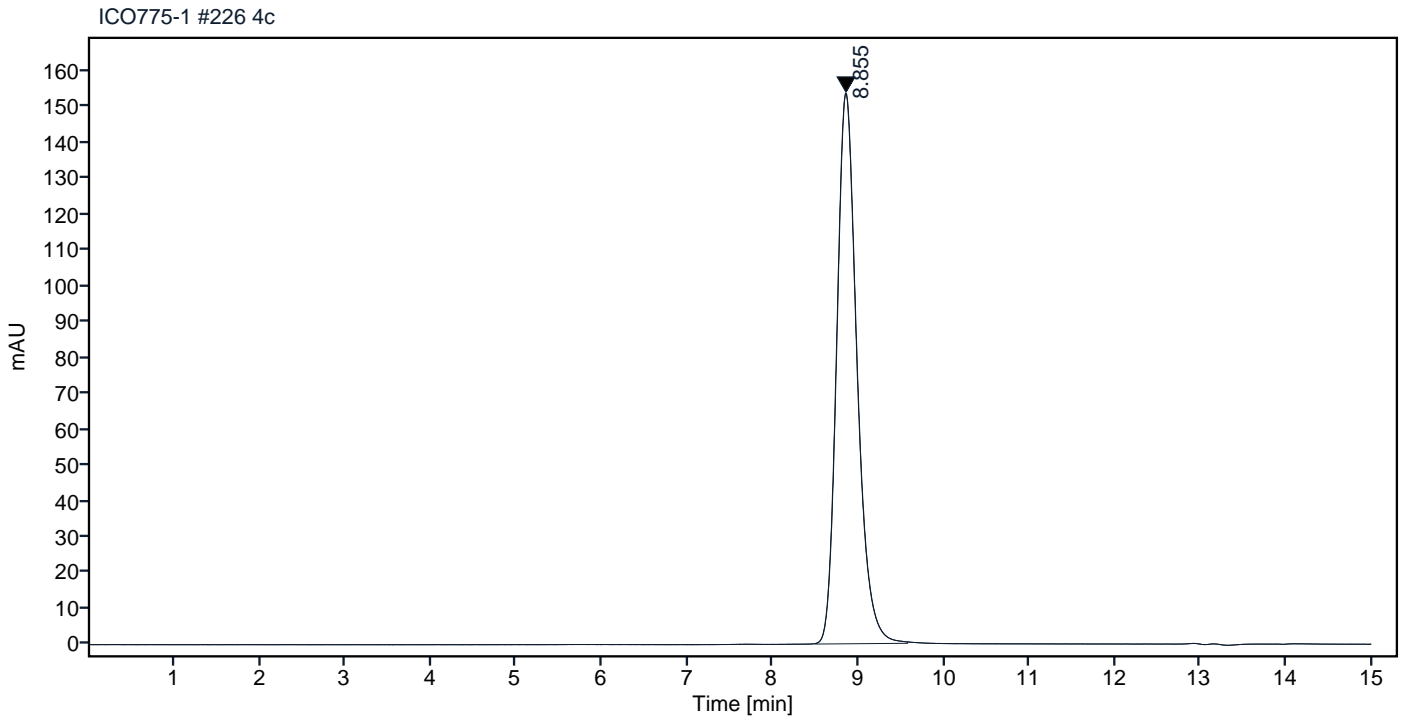
Cardiac troponin I (cTnI), a 24 kDa protein, is a vital part of the troponin complex, working alongside troponin T and troponin C to control the contraction and relaxation of cardiac muscle fibres. In cases of cardiac injury or stress, such as myocardial infarction (MI), the integrity of cardiac muscle cells is compromised, leading to the release of cTnI into the bloodstream. Cardiac troponin I (cTnI) possesses a remarkable specificity for the heart muscle, rendering it an invaluable diagnostic tool in identifying myocardial infarction (MI). Consequently, cTnI has attained the status of the gold standard biomarker for diagnosing myocardial injury, with a particular emphasis on myocardial infarction. Given that the majority, if not all, of the cTnI molecules in the blood exist as binary (cTnI-C) or ternary complexes (cTnT-I-C), it's crucial to utilize cTnI-specific antibodies that can precisely recognize the troponin complex when designing an assay.



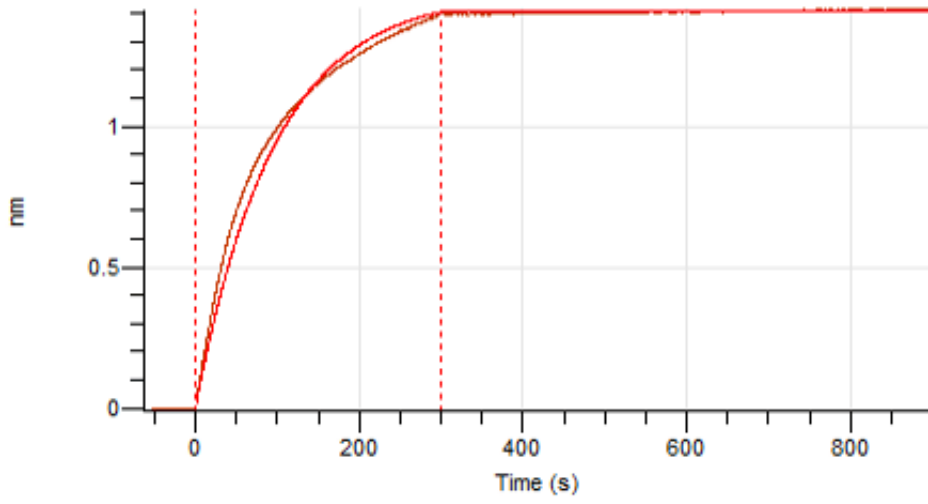
**Figure 1.** Simply Blue Safe Stained SDS-PAGE analysis of mAb to cardiac troponin I, clone 10C12. 4-15% gradient gel is used for analysis. Lane 1. Monoclonal antibody to cardiac troponin I, 10C12 (-DTT) Lane 2. Size marker Lane 3. Monoclonal antibody to cardiac troponin I, 10C12 (+DTT)

## Peak Table

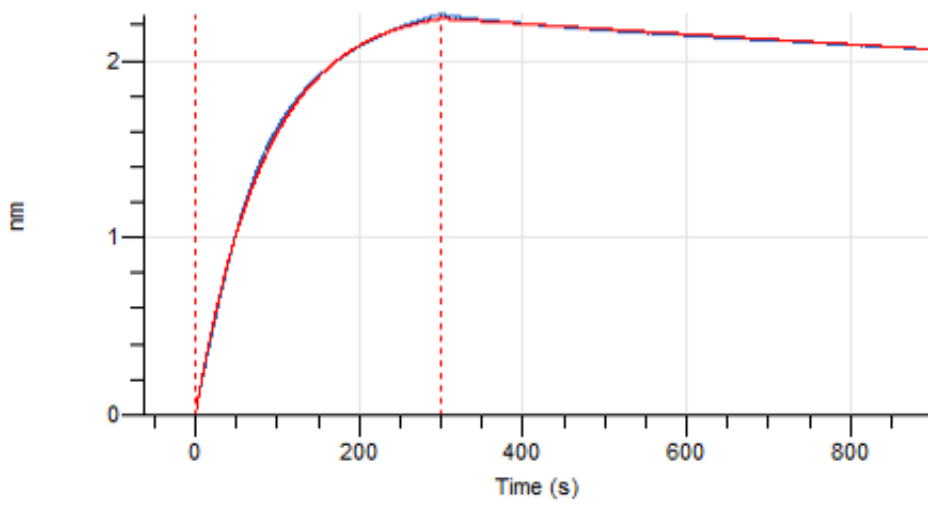
RT	Area	Area %
8.855	2536.8	100.00



**Figure 2.** Analytical SEC of final product.



**Figure 3.** Octet RED96e analysis, biotinylated human cardiac troponin complex was loaded on sensor for capture of the antibody.



**Figure 4.** Octet RED96e analysis, antibody was loaded on sensor for capture of human cardiac troponin complex.