

Product specifications

Name	Anti-h cTnI RC9750 SPTN-5
Specificity	Antibody recognizes human cardiac troponin I (cTnI)
Description	Recombinant chimeric antibody containing variable region from chicken IgY and constant region from human IgG ₁ , cultured <i>in vitro</i> .
Product code	700050
Product buffer solution	50 mM Na-citrate, pH 6.0, 0.9 % NaCl, 0.095 % NaN ₃ as a preservative
Shelf life and storage	15 months from manufacturing at 2–8 °C
Subclass	human IgG ₁
Analyte description	Troponins form a complex of three regulatory proteins (troponin C, I and T) that are integral to muscle contraction in skeletal and cardiac muscles. Serum cardiac troponin tests can be used to help diagnose several different heart disorders, especially myocardial infarction.

Parameters tested on each lot

Product appearance	Liquid, may turn slightly opaque during storage
Product concentration	5.0 mg/ml (+/- 10 %)
Immunoreactivity	Passed based on kinetic parameters determined by bio-layer interferometry (BLI).
IEF Profile	N/D
Purity	≥ 95 %

Kinetic parameters

Association rate constant	3.3×10^4 1/Ms
Dissociation rate constant	1.1×10^{-4} 1/s
Affinity constant	$K_A = 3.1 \times 10^8$ 1/M; $K_D = 6.5 \times 10^{-9}$ (= 6.5 nM)
Determination method	BLI analysis (Octet RED96e)
Determination antigen	Troponin ITC complex, EastCoast Bio, cat LA200

Cross-reactivities Does not cross-react with skeletal troponin I (sTnI) or troponin C (TnC)

Epitope Conformational epitope aa 39-52 of cTnI

Pair recommendations

		DETECTION						
		9701/ RC9701	9703	9705	9707/ RC9707	9708	9709	RC9750
CAPTURE	9701/ RC9701	-	+	+	+	+	+	+
	9703	-	-	+	-	+	+	-
	9705	+	+	-	+	-	-	+
	9707/ RC9707	-	-	-	-	-	-	-
	9708	-	-	-	-	-	-	-
	9709	-	+	-	-	-	-	+
	RC9750	+	-	+	+	+	+	-

RC9750 is recommended as a very sensitive capture.

For increased sensitivity, 2+1 or 2+2 antibody approach is recommended, for example capture: 9701/RC9701 & 9705, detection 9703 & 9707/RC9707.

Please note that pair recommendations are based on results obtained by our laboratory. Equally good results may be obtained using other pairs and therefore these recommendations are only indicative.

Platforms tested FIA

Antigens tested Recombinant cTnI antigen, Medix Biochemica 610102, native cTnI antigen Lee Biosolutions 550-11, native cardiac Troponin Complex (cTn ITC) antigen, Lee Biosolutions 550-08.

TEMPERATURE, TIME	RESULT
-70 °C, 21 days	OK
-20 °C, 21 days	OK
+4 °C, 21 days	OK
+35 °C, 21 days	OK
+45 °C, 7 days	OK

Stability testing is performed in the product buffer to see whether different temperatures affect the antigen binding, charge or composition of the antibody. Please note that the shelf life given on the first page is based on real time stability testing at 2–8 °C in the product buffer.

Miscellaneous Antibody was discovered by HybriFree Technology.

References Kivi et al. HybriFree: a robust and rapid method for the development of monoclonal antibodies from different host species. BMC Biotechnol. 2016 Jan 8; 16:2.