

Product specifications

Name	Anti-h cTnI 9707 SPTN-5
Specificity	Antibody recognizes human cardiac troponin I (cTnI)
Description	Monoclonal mouse antibody, cultured <i>in vitro</i> under conditions free from animal-derived components
Product code	100180
Product buffer solution	50 mM Na-citrate, pH 6.0, 0.9 % NaCl, 0.095 % NaN ₃ as a preservative
Shelf life and storage	18 months from manufacturing at 2–8 °C
Subclass	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	80–120 % compared to the reference sample in an FIA test
IEF Profile	5.9–7.4
Purity	≥ 95 %

Kinetic parameters

Association rate constant	1.9×10^6 1/Ms
Dissociation rate constant	5.8×10^{-6} 1/s
Affinity constant	$K_A = 3.3 \times 10^{11}$ 1/M; $K_D = 3.0 \times 10^{-12}$ M (= 0.003 nM)
Determination method	SPR analysis (ProteOn XPR36)
Determination antigen	Human cardiac troponin I-T-C complex, HyTest (Cat 8T62, Lot 13/07)

Cross-reactivities

Skeletal troponin I (sTnI) 14 %

Does not recognize cardiac troponin T (cTnT), cardiac troponin C (cTnC), or skeletal troponin T (sTnT)

Epitope

In the C-terminal part of the cTnI molecule (residues 190-195)

Pair recommendations

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

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

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, and native cardiac Troponin Complex (cTn ITC) antigen, Lee Biosolutions 550-08.

Product stability

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

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References

Savukoski, T. et al. (2012) Troponin-specific autoantibody interference in different cardiac troponin I assay configurations. Clin. Chem. 58:1040-1048.