

Product specifications

Name	Anti-h PCT 4006 SPTN-5
Specificity	Antibody recognizes human procalcitonin (PCT)
Description	Monoclonal mouse antibody, cultured <i>in vitro</i> under conditions free from animal-derived components
Product code	100567
Product buffer solution	50 mM Na-citrate, pH 6.0, 0.9 % NaCl, 0.095 % NaN ₃ as a preservative
Shelf life and storage	Unspecified, storage at 2–8 °C
Subclass	IgG ₁
Analyte description	Procalcitonin (PCT) is a precursor protein of the hormone calcitonin, produced by the thyroid gland. It is a 116 amino acid protein that is cleaved intracellularly to form three peptides: N-terminal procalcitonin, calcitonin, and katacalcin. In healthy individuals, only the calcitonin polypeptide is secreted into the bloodstream, and PCT serum levels are very low. However, in patients with systemic infections, and especially sepsis, serum PCT levels rise rapidly.

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	6.3–7.4
Purity	≥ 95 %

Kinetic parameters

Association rate constant	6.7×10^4 1/Ms
Dissociation rate constant	3.5×10^{-4} 1/s
Affinity constant	$K_A = 1.9 \times 10^8$ 1/M; $K_D = 5.2 \times 10^{-9}$ M (=5.2 nM)
Determination method	SPR analysis (ProteOn XPR36)
Determination antigen	PCT, Medix Biochemica (Cat 610080)

Cross-reactivities Does not recognize canine procalcitonin.

Epitope Anti-h PCT 4006 antibody recognizes the katacalcin domain of procalcitonin, i.e. the region Asp(96) - Asn(116), as calculated from the peptide sequence of the mature PCT protein, without the signal sequence. The binding epitope is located in the region Val(109)-Asn(116).

Pair recommendations

		DETECTION					
		4003	4004	4005	4006	4008	4051
CAPTURE	4003	-	+	+	-	-	+
	4004	+	-	-	+	+	-
	4005	+	-	-	+	+	-
	4006	-	+	+	-	-	+
	4008	-	+	+	-	-	+
	4051	+	-	-	+	+	-

Following pairs are especially recommended for the below mentioned assays:
LF: 4006 (membrane) – 4004 (particles) and 4006 (membrane) – 4051 (particles)

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, LF, CLIA

Antigens tested Recombinant PCT antigen, Medix Biochemica 610080.

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, 3 days	OK
+45 °C, 7 days	Charge alterations

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 -

References -