

Product specifications

Name	Anti-h CRP 6405 SPTN-5
Specificity	Antibody recognizes human C-reactive protein (CRP)
Description	Monoclonal mouse antibody, cultured <i>in vitro</i> under conditions free from animal-derived components.
Product code	100358
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	CRP is a member of the class of acute-phase reactants, as its levels rise dramatically during inflammatory processes occurring in the body. CRP rises up to 50,000-fold in acute inflammation, such as infection. It rises above normal limits within 6 hours, and peaks at 48 hours. Its half-life is constant, and therefore its level is mainly determined by the rate of production (and hence the severity of the precipitating cause). CRP is used mainly as a marker of inflammation. Measuring and charting CRP values can prove useful in determining disease progress or the effectiveness of treatments.

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	5.8–7.5
Purity	≥ 95 %

Kinetic parameters

Association rate constant	2.6×10^6 1/Ms
Dissociation rate constant	6.6×10^{-5} 1/s
Affinity constant	$K_A = 3.9 \times 10^{10}$ 1/M; $K_D = 2.6 \times 10^{-11}$ M (= 0.03 nM)
Determination method	SPR analysis (ProteOn XPR36)
Determination antigen	Human CRP, Scripps (Cat C0124, Lot 2200701)



Cross-reactivities Recognizes serum amyloid-P component (SAP) 0.02 % (Sigma, Cat S6012, Lot 34F0284)

Epitope Not Determined (N/D)

Pair recommendations

		DETECTION				
		6402	6403	6404	6405	6407
CAPTURE	6402	+	+	+	+	+
	6403	+	+	+	+	-
	6404	+	+	+	+	+
	6405	+	-	+	+	+
	6407	+	-	+	+	+

Following pairs are especially recommended for the below mentioned assays:

LF: 6402 (membrane) – 6402 (particles), 6402 – 6404, 6402 – 6405,
IT: 6405 – 6405, hs-CRP (high sensitivity): 6404 – 6407, 6405 – 6407

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, IT

Antigens tested Native CRP antigen, Lee Biosolutions 140-11A and 140-12, recombinant CRP antigen, Lee Biosolutions 140-11R.

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 Note that CRP is a pentameric protein. The same antibody can thus be used both as a capture and a detection antibody.

Binding of CRP by antibody 6405 is not inhibited by EDTA or phosphorylcholine (Käpyaho et al. 1989).

References Käpyaho, K., Welin, M.-G., Tanner, P., Kärkkäinen, T. and Weber, T. (1989) Rapid determination of C-reactive protein by enzyme immunoassay using two monoclonal antibodies. Scand. J. Clin. Lab. Invest. 49:389-393