Medix Biochemica

Product specification
ANTIBODY
2022-11-14

Anti-h CRP 6404 SP-2

Product overview

Catalog number	100058
Specificity	Antibody recognizes human C-reactive protein (CRP)
Description	Monoclonal mouse antibody, cultured *in vitro* under conditions free from animal-derived components.
Product buffer solution	0.9 % NaCl, 0.095 % NaN_3 as a preservative
Shelf life and storage	24 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	2.0–2.5 mg/ml
Immunoreactivity	80–120 % compared to the reference sample in an FIA test
IEF Profile	5.7–6.7
Purity	≥ 95 %

Kinetic parameters

Association rate constant	7.7×10^6 1/Ms
Dissociation rate constant	4.1×10^{-4} 1/s
Affinity constant	$K_A = 1.4 \times 10^{10}$ 1/M; $K_D = 5.3 \times 10^{-11}$ M (= 0.05 nM)
Determination method	SPR analysis (ProteOn XPR36)
Determination antigen	Human CRP, Scripps (Cat C0124, Lot 2200701)

Oy Medix Biochemica Ab
Klovinpellontie 3,
FI-02180 Espoo, Finland

medix@medixbiochemica.com
www.medixbiochemica.com
VAT reg. no. FI14631532

Cross-reactivities

Does not recognize serum amyloid-P complex

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

Recombinant CRP antigen, Lee Biosolutions 140-11R.

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

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 6404 is not inhibited by EDTA or phosphorylcholine (Käpyaho et al. 1989).

Antibody 6404 has been used to develop a high sensitivity/broad range CRP-assay with a detection limit of 0.16 µg/L and 0.064 – 1200 mg/L measuring range with a 400-fold dilution (Tarkkinen et al. 2002).

Oy Medix Biochemica Ab
Klovinpellontie 3,
FI-02180 Espoo, Finland

medix@medixbiochemica.com
www.medixbiochemica.com
VAT reg. no. FI14631532

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

Nilsson, S., Lager, C., Laurell, T. and Birnbaum, S. (1989) Thin-layer immunoaffinity chromatography with bar code quantitation of C-reactive protein. Anal. Chem. 67: 3051-3056

Tarkkinen, P., Palenius,T. and Lövgren, T. (2002) Ultrarapid, ultrasensitive one-step kinetic immunnoassay for C-reactive protein (CRP) in whole blood samples: Measurement of the entire CRP concentration range with a single sample dilution, Clin.Chem. 48(2):269-277

Oy Medix Biochemica Ab
Klovinpellontie 3,
FI-02180 Espoo, Finland

medix@medixbiochemica.com
www.medixbiochemica.com
VAT reg. no. FI14631532