

## PRODUCT SPECIFICATIONS

Date: 2013-03-19

<b>PRODUCT NAME</b>	:	Anti-h CRP 6404 SP-6
<b>PRODUCT SPECIFICITY</b>	:	Antibody recognizes human C-Reactive Protein
<b>PRODUCT CODE</b>	:	100061
<b>PRODUCT BUFFER</b>	:	0.9 % NaCl, 0.1 % NaN <sub>3</sub> as a preservative
<b>SHELF LIFE AND STORAGE</b>	:	24 months from manufacturing at 2-8 °C
<b>ANALYTE DESCRIPTION</b>	:	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 FROM EACH LOT

<b>PRODUCT APPEARANCE</b>	:	Clear liquid
<b>PRODUCT CONCENTRATION</b>	:	> 6 mg/ml
<b>PRODUCT ACTIVITY</b>	:	80-120 % compared to reference in an IFMA-test
<b>IEF-RANGE</b>	:	5.4 - 6.1
<b>PURITY</b>	:	≥ 95 %

## PARAMETERS DETERMINED ONLY DURING PRODUCT R&amp;D PHASE

<b>CLASS AND SUBCLASS</b>	:	IgG <sub>1</sub>
<b>ASSOCIATION CONSTANT</b>	:	7.7 x 10 <sup>6</sup> 1/Ms
<b>DISSOCIATION CONSTANT</b>	:	4.1 x 10 <sup>-4</sup> 1/s
<b>AFFINITY CONSTANT</b>	:	K <sub>A</sub> = 1.4 x 10 <sup>10</sup> 1/M; K <sub>D</sub> = 5.3 x 10 <sup>-11</sup> M (=0.05 nM)
<b>DETERMINATION METHOD</b>	:	SPR analysis (ProteOn XPR36)
<b>ANTIGEN</b>	:	Scripps CO124, #2200701
<b>CROSS-REACTIVITIES</b>	:	Serum amyloid P Component (SAP) 0.02 % (Sigma Cat No S-6012 Lot 34F-0284)

**EPITOPE** : Note that CRP is a pentameric protein so same antibody can be used as solid phase as well as a labeled antibody.

**EPITOPE GROUP**

: -

Two antibodies binding to the same, or closely located epitopes, belong to the same group and hence cannot be used as a pair in a sandwich assay. Epitope group numbering does not give any detailed information where the epitope is located.

**PAIR RECOMMENDATIONS**

SOLID	LABEL
6404	6405
6404	6404

Please note that pair recommendations are based on results obtained in our laboratory. Equally good results may be obtained using other pairs and therefore these recommendations should be taken only as a directive.

**PRODUCT STABILITY**

TEMPERATURE, DAYS	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

Please note that the shelf life given on page one is based on real time stability testing at +2-8 °C in the product buffer.

Stability testing is performed in the product buffer to see whether different temperatures affect the antigen binding, charge or composition of the antibody. The maximum duration of the test is 21 days, except for the +45 °C only 7 days.

pH, 14 DAYS, +4 °C	RESULT
5.0	N/D
6.0	N/D
7.0	N/D
8.0	N/D

Stability testing is performed to see whether pH affects the antigen binding, charge or composition of the antibody during 14 days at +4 °C.

**MISCELLANEOUS**

: Binding of CRP is not inhibited by EDTA or phosphorylcholine (Käpyaho et al., 1989). This clone 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)

**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 immunoassay 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

**Legal disclaimer**

MedixMAB monoclonal antibodies meet their specifications if transported, stored and used according to the instructions for use. See also separate *Notes on use and storage of monoclonal antibodies*. If not otherwise agreed in writing all products are sold under *General Delivery Terms*. Other terms may apply if MedixMAB monoclonal antibodies are purchased from an official distributor of Medix Biochemica products. MedixMAB is a registered trademark of Medix Biochemica and may not be used or reproduced without Medix Biochemica's written permission. Further information on products and methods is available from medixMAB website and extranet.