



Diasystem  
**Vet**



Canine CRP Immunoassay

---

**INFLAMMATION MARKER  
IN SERUM AND PLASMA**

# Canine CRP Immunoassay

## Background

The C-reactive protein (CRP) is a major acute phase protein in dogs. CRP is synthesised by the liver, in response to systemic inflammation due to various causes. During inflammation, CRP concentration rise to more than 100 times the normal level. The increase can be measured after 4 – 6 hours and peaks at 24 – 48 hours. In addition, CRP levels drop quickly. Due to its short half-life of about 19 hours, CRP makes for a quantitative real-time marker of inflammation.

## Clinical Use

Canine CRP can be used not only to detect and quantify the degree of systemic inflammation, but also to monitor the patients response to treatment.

When the cause of inflammation is successfully removed, CRP levels drop rapidly. The short half-life of CRP combined with its high sensitivity, gives a direct assessment of the inflammations extent. Compared to markers such as white blood cell count (WBC), and erythrocyte sedimentation rate (ESR), CRP has a higher sensitivity and better monitoring abilities.

Early detection of canine CRP enables precise diagnosis and fast individualised patient decisions. This results in reduced care time and improved patient outcomes. Measuring canine CRP is crucial for detecting systemic inflammation, predicting prognosis, evaluating treatment response, and monitoring disease activity.



## Quality

One of the major benefits of the Diasystem Vet Canine CRP assay, is the use of canine-specific CRP antibodies. Canine CRP is, in contrast to human CRP, glycosylated at two of five subunits of the CRP-protein. Because of this, the antibodies used in the reagent have lower batch-to-batch variation than CRP antibodies of human origin. In addition, the Diasystem Vet Canine CRP Immunoassay contains avian antibodies, reducing interference compared to assays using mammalian antibodies.

## Reagent

The assay is a particle-enhanced turbidimetric immunoassay, for in-vitro diagnostic testing of CRP in canine serum and plasma samples. The test is performed in only 10 minutes and can be applied

to a wide range of clinical chemistry analysers. Measuring range spans from 10 to 300 mg/L, with a security zone up to 1000 mg/L. The CRP biomarker can be included in canine health screening profiles, but may also be offered as a stand-alone test.

## Method comparison

The Diasystem Vet canine CRP was compared to Competitor on the Diasystem VET240 instrument. 14 serum samples was assayed on both methods.

## Linearity

Dilution of a canine CRP sample containing canine CRP in a protein enriched phosphate buffer was used. The concentration of the resulting samples was measured. Recovery from expected concentrations was calculated. Based on the interpolation, the assay is considered satisfactory linear in the range 10 – 300mg/L.

Dilution factor (%)	Expected concentration (mg/L)	Measured concentration (mg/L)	Recovery (%)
100	310,00	310,02	100,0
80	248,00	253,37	102,0
60	186,00	186,28	100,0
40	124,00	124,84	101,0
20	62,00	60,71	98,0
10	31,00	29,76	96,0
5	15,50	16,18	104,0
2,5	8,00	9,01	113,0

## Method comparison

The Diasystem Vet canine CRP was compared to Competitor on the Diasystem VET240 instrument. 14 serum samples was assayed on both methods and samples was collected from Evidensia Strömsholm.

Patient ID	Concentration Strömsholm Cobas C311 (mg/L)	Concentration Diasystem VET240 (mg/L)	Recovery (%)
1	8	8	100,0
2	9	10	90,0
3	51	51	100,0
4	73	74	98,6
5	106	105	101,0
6	108	107	100,9
7	110	107	102,8
8	122	116	105,2
9	123	118	104,2
10	136	136	100,0
11	148	151	98,0
12	148	146	101,4
13	170	161	105,6
14	256	251	102,0

# INFLAMMATION MARKER IN SERUM AND PLASMA

## Benefits

- 1 Quantified measuring of CRP in canine serum and plasma.
- 2 Canine-specific antibodies ensure specificity to the canine CRP antigen.
- 3 Avian origin antibodies contribute to reduced interference.
- 4 Verified for a wide range of clinical analysers.
- 5 Results within 10min. (instrument depended)

## Performance

<b>Sample type</b>	Serum and Plasma
<b>Assay type</b>	PETIA
<b>Format</b>	Dual reagent, ready to use
<b>Precision</b>	Total CV < 5%
<b>LoQ</b>	7 mg/L
<b>Reference range</b>	< 10 mg/L
<b>Security zone</b>	Up to 1000 mg/L
<b>Measuring range</b>	10 – 300 mg/L
<b>Calibration stability</b>	4 weeks
<b>Assay time</b>	Approx. 10 min

## Products information

Code	Name	Content
1000	Diasystem Vet canine CRP Immunoassay	R1 2 x 27mL + R2 2 x 6,3mL
1000b	Diasystem Vet canine CRP Immunoassay	R1 2 x 25mL + R2 2 x 12,5mL
1001	Diasystem Vet canine CRP Calibrator Kit	6 x 0,5mL
1002	Diasystem Vet canine CRP Control Kit	2 x 0,5mL (High and Low)

## Applications

More applications available at request.

- » Diasystem\* VET240
- » Mindray\* BS120
- » Siemens Advia\* 1800
- » Abbott Architect\* c4000
- » Beckman Coulter\* AU400
- » Roche Cobas\* C311
- » Roche Cobas\* C111

\* Registered trademarks



**DIASYSTEM VET AB**

Datorgatan 3, SE-561 33 Huskvarna, Sweden

Tfn: +46 (0) 36 12 62 20

Fax: +46 (0) 36 18 77 30

Email: [info@diasystem.se](mailto:info@diasystem.se)

**ORDER/ADMINISTRATION**

Tfn: +46 (0) 36 12 62 20

Email: [order@diasystem.se](mailto:order@diasystem.se)

**SUPPORT**

Tfn: +46 (0) 36 12 62 20

Email: [service@diasystem.se](mailto:service@diasystem.se)

**[WWW.DIASYSTEMVET.SE](http://WWW.DIASYSTEMVET.SE)**