

Product datasheet

# Human CRP ELISA Kit (C-Reactive protein), Fluorescent ab278042

SimpleStep ELISA

[4 Images](#)

Overview

**Product name** Human CRP ELISA Kit (C-Reactive protein), Fluorescent

**Detection method** Fluorescent

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Supernatant	8			2.5%

Inter-assay

Sample	n	Mean	SD	CV%
Supernatant	3			3.1%

**Sample type** Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma

**Assay type** Sandwich (quantitative)

**Sensitivity** 1.23 pg/ml

**Range** 1.95 pg/ml - 8000 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	110	105% - 113%
Serum	88	83% - 93%
Hep Plasma	98	89% - 110%
EDTA Plasma	100	95% - 104%
Cit plasma	91	86% - 97%

<b>Assay time</b>	1h 30m
<b>Assay duration</b>	One step assay
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Product overview</b>	C-Reactive Protein (CRP) <i>in vitro</i> CatchPoint SimpleStep ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of C-Reactive Protein (CRP) protein in human serum, plasma, and cell culture supernatants.

This CatchPoint SimpleStep ELISA kit has been **optimized for Molecular Devices Microplate Readers**. Click [here](#) for a list of recommended Microplate Readers.

If using a Molecular Devices' plate reader supported by SoftMax® Pro software, a preconfigured protocol for these CatchPoint SimpleStep ELISA Kits is available with all the protocol and analysis settings at [www.softmaxpro.org](http://www.softmaxpro.org).

The CatchPoint SimpleStep ELISA employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. CatchPoint HRP Development Solution containing the Stoplight Red Substrate is added. During incubation, the substrate is catalyzed by HRP generating a fluorescent product. Signal is generated proportionally to the amount of bound analyte and the intensity is measured in a fluorescence plater reader at 530/570/590 nm Excitation/Cutoff/Emission.

<b>Notes</b>	CRP displays several functions associated with host defense: it promotes agglutination, bacterial capsular swelling, phagocytosis and complement fixation through its calcium-dependent binding to phosphorylcholine. CRP can interact with DNA and histones and it may scavenge nuclear material released from damaged circulating cells. CRP is secreted; it forms a homopentamer pentaxin (or pentraxin) which have a discoid arrangement of 5 non-covalently bound subunits. CRP binds 2 calcium ions per subunit. The concentration of CRP in plasma increases greatly during acute phase response to tissue injury, infection or other inflammatory stimuli. It is induced by IL1/interleukin-1 and IL6/interleukin-6.
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<b>Platform</b>	Pre-coated microplate (12 x 8 well strips)
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## Properties

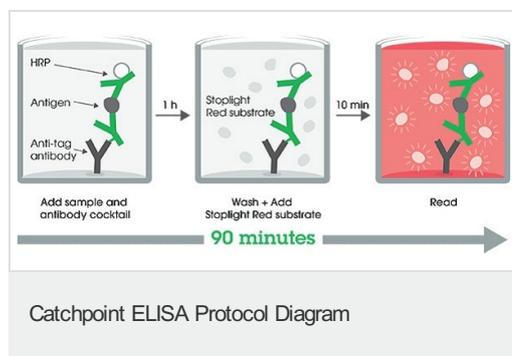
<b>Storage instructions</b>	Store at +4°C. Please refer to protocols.
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<b>Components</b>	<b>1 x 96 tests</b>
100X Stoplight Red Substrate	1 x 120µl
10X Human CRP (C-Reactive Protein) Capture Antibody	1 x 600µl
10X Human CRP (C-Reactive Protein) Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
500X Hydrogen Peroxide (H2O2, 3%)	1 x 50µl

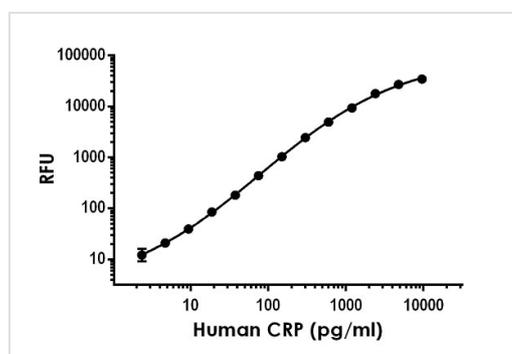
Components	1 x 96 tests
Antibody Diluent 4BI	1 x 6ml
Human CRP (C-Reactive Protein) Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated Black 96-Well Microplate	1 unit
Stoplight Red Substrate Buffer	1 x 12ml

<b>Function</b>	Displays several functions associated with host defense: it promotes agglutination, bacterial capsular swelling, phagocytosis and complement fixation through its calcium-dependent binding to phosphorylcholine. Can interact with DNA and histones and may scavenge nuclear material released from damaged circulating cells.
<b>Tissue specificity</b>	Found in plasma.
<b>Sequence similarities</b>	Belongs to the pentaxin family. Contains 1 pentaxin domain.
<b>Cellular localization</b>	Secreted.

## Images

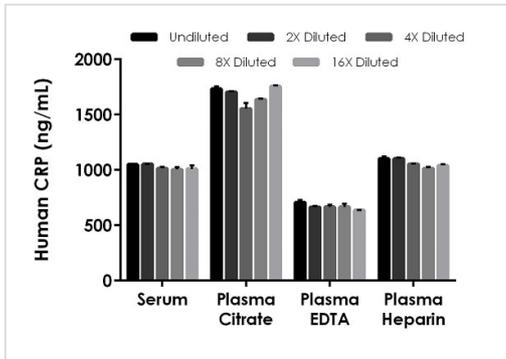


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



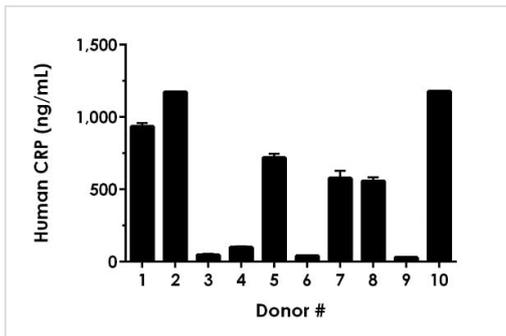
Example of human CRP standard curve in Sample Diluent NS.

Raw data generated on SpectraMax M4 Multi-Mode Microplate Reader is shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native CRP in human serum and plasma samples.

The concentrations of CRP were measured in duplicates, interpolated from the CRP standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:1000, plasma (citrate) 1:2000, plasma (EDTA) 1:1000, plasma (heparin) 1:1000. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CRP concentration was determined to be 1025.5 ng/mL in serum, 1676.5 ng/mL in plasma (citrate) and 668.3 ng/mL in plasma (EDTA), and, 1062.8 ng/mL in plasma (heparin).



Serum from ten individual healthy human male donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CRP concentration was determined to be 535.7 ng/mL with a range of 28.1 – 1180.4 ng/mL.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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