

# CRP

## C-reactive Protein Test Kit (Fluorescence Immunoassay Method)

### Instructions for Use

Version:A/0

#### Manufacturer

Shijiazhuang Hipro Biotechnology Co.,Ltd.  
No. 3 Building, Block C, Fangyi Science Park, No. 313 Zhujiang-  
dadao Road, Hi-tech Zone, Shijiazhuang, 050000, Hebei, China.  
After sale service: 400-0191-606  
www.hipro.us

EC REP Lotus NL B.V.  
Koningin Julianaplein 10, 1e Verd, 2595AA, The Hague,  
Netherlands.  
Tel: +31644168999

#### Product Name

General Name: C-reactive Protein (CRP) Test Kit  
(Fluorescence Immunoassay Method)

#### Package Specification

25 Tests/Kit

Note: other specifications are available, 10Tests/Kit, 50  
Tests/Kit, 100 Tests/Kit.

#### Intended Use

The Hipro C-reactive Protein (CRP) test kit is an in vitro diag-  
nostic test for the quantitative measurement of C-reactive  
protein in human serum. plasma or whole blood. It is  
intended for aid use in evaluation of conditions thought to  
be associated with inflammation. It is used in conjunctions  
with other laboratory and clinical findings.

For in vitro diagnostic use only .

For prescription use only.

#### Test Principle

The C-reactive Protein (CRP) test kit is a rapid quantitative  
assay based on the principle of double antibodies sandwich  
fluorescence immunoassay method.

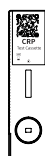
C-reactive protein antigen in the sample reacts with mouse  
anti-human CRP antibody, to form antigen-antibody complexes.

The complexes migrate upward, firstly captured by mouse  
monoclonal anti-CRP antibody on the T line and then by  
polyclonal goat anti-mouse IgG antibody on the C line  
coated in the membrane. After the reaction, the fluores-  
cence immunoassay analyzer calculates the CRP concentra-  
tion according to the fluorescence intensity of T and C line.

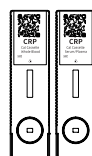
#### Material Provided

Component	25Kits
Test Cassette	25
Calibration Cassette	2
Sample Diluent	25
Capillary device with dropper	25
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##### Test Cassette



##### Calibration Cassette



QR code is with  
built-in parameter  
for each assay.

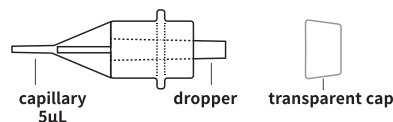
##### Sample Diluent



##### Instructions for Use



##### Capillary device with dropper



#### Material Needed but Not Provided

Timing device

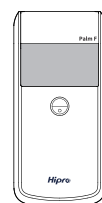
#### Storage&Validity

Store test kit at: 2°C-30°C until the expiration date indicated  
on the label.

Avoid exposure to direct sunlight. The test kit is stable for  
18months when unopened.

Perform the test within 1 hour when opened.

#### Applicable Instrument



Palm F Fluorescence  
Immunoassay Analyzer

#### Specimen type

The specimen type of Hipro CRP test kit is human serum,  
plasma or whole blood.

1. Take blood samples in observance of the standard  
precautions for the withdrawal of biological fluids.
2. Do not use samples that have remained at room tem-  
perature for more than 8 hours.
3. Due to possible evaporation effects, samples on the  
analyzer should be measured within 2 hours.

#### Storage

Fresh collected specimens are stable if stored at 2°C-8°C for  
up to 24 hours. For longer storage, aliquot, cap tightly, and  
freeze at -20°C for up to 3months

Avoid repeated freezing and thawing.

Avoid hemolysate.

#### Required volume

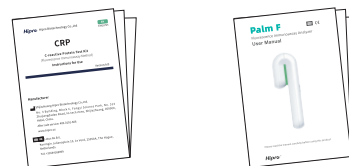
5μL is required for serum, plasma or whole blood used for  
direct reaction.

5μL is required of diluted sample for each determination.  
This volume does not include the dead volume(unusable  
volume in the sample container) or the additional volume  
required to make replicate test or other tests to be  
performed on the same sample.

### CRP Test Kit Instructions Guide

#### Before You Begin

- 1a** Please read the CRP IFU and applicable instru-  
ment User Manual carefully before operation.  
Please follow the instructions strictly.

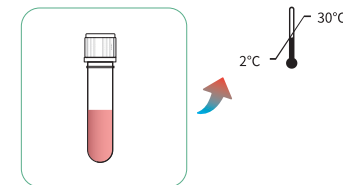


- 1b** A timing device (phone, clock or timer) is required  
but not provided.

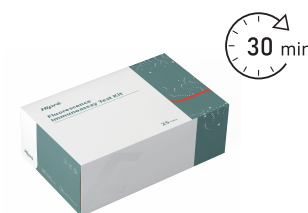


#### Before You Begin

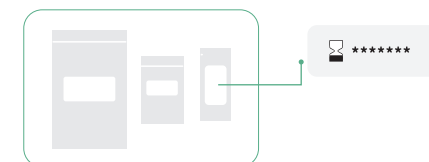
- 1c** Allow the sample back to room temperature.



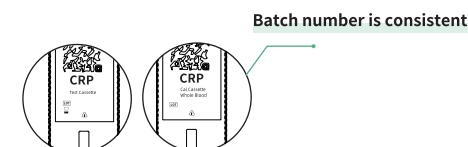
- 1d** Ensure the test kit is at room temperature for at  
least 30 minutes prior to use.



- 1e** Check on the expiration date on labels of differ-  
ent component.

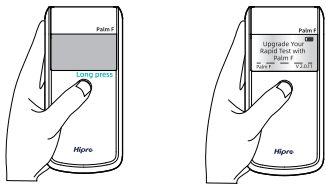


- 1f** Make sure the lot number on calibration cassette  
and test cassette are same.  
Do not misuse the cassettes with different lot.

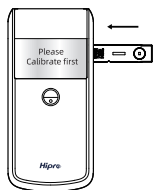


Test Procedures

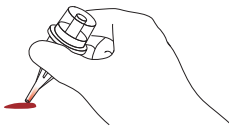
2a Turn on the applicable instrument according to the User Manual.



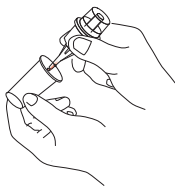
2b Insert the calibration cassette into the analyzer as the direction shows, to let the built-in parameter be read.



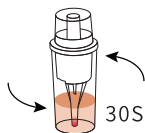
3a Use the quantitative capillary to collect blood. Make sure the transparent cap is screwed tightly onto the dropper part.



3b Insert the capillary(with collected blood) into the tube.

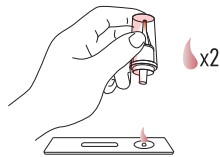


3c Make sure the tube and the capillary device are tightly screwed and shake from left to right for 30seconds; During shake, make sure the transparent cap tightly covers the dropper and screws with the device and make sure the capillary is down toward.



Test Procedures

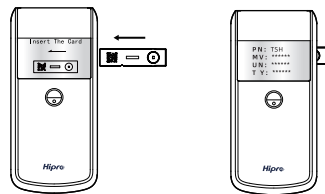
3d Add 2 drops of mixed liquid from the sample diluent tube onto the sample well of test cassette.



4a Wait for 5 minutes before reading results.



4b Insert the test cassette into the analyzer and the analyzer will display the results automatically.



**!** Avoid bubbles when collecting samples.

Reference Value

The normal reference range is <10 mg/L.

200 healthy patients were measured and the results (95%) meet the linearity range 10mg/L.

The value is indicative only and may differ from other published values as a result of differences in methods and in the population being studied. It is recommended that each laboratory establish its own reference range.

Performance Characteristics

1. **Strip width**  
The width of strip should be  $\geq 2.5\text{mm}$ .
2. **Liquid flow speed**  
The speed should be  $\geq 10\text{mm/min}$ .

Performance Characteristics

3. **Linearity**  
Within range 0.5~200 mg/L, the correlation coefficient (r) should be  $\geq 0.990$ .
4. **Within-lot precision**  
The coefficient of variation (CV) should be  $\leq 15\%$ .
5. **Between-lot precision**  
The coefficient of variation (CV) should be  $\leq 20\%$ .
6. **Accuracy**  
The relative deviation should be  $\leq 15\%$ .
7. **Limit of blank(LoB)**  
The LoB should be  $\leq 0.5\text{mg/L}$ .

Precautions and limitations

For in vitro diagnostic use

**Only experienced laboratory personnel should use this test and handling all laboratory reagents should be based on normal precautions required.**

Safety precautions

1. Do not smoke, eat or apply cosmetics in areas in which patients' samples or kit reagents are handled.
2. Laboratory gloves should be worn while handling patients' samples or disposing of solid or liquid wastes.
3. Disposal of all waste material should be in accordance with local guidelines.
4. Avoid electromagnetic or vibration environment for analyzer.
5. Do not insert the polluted cassette into analyzer.

Potential biohazard warning

Some reagents of Hipro test kits contain material of animal origin, even if they are certified as deriving from healthy animals, it is recommended to handle them with the same precaution used for potentially infectious samples.

Limitations-interference

As with all immunoassays, the results of this test can be influenced by factors present in some patients' specimens. The factors include hemoglobin>5g/L, triglyceride>15mg/mL, bilirubin>0.2mg/mL.

For diagnostic purposes, the results obtained from this assay should always be used in combination with the clinical examination, patient medical history, and other findings.

When the CRP concentration  $\leq 600\text{mg/L}$ , there will not be Hook effect.

Safety Phases

S 37 Wear suitable gloves

S 60 This material and /or its container must be disposed of as hazardous waste.

Symbols used on labels

Symbol	Usage
	Use-By date
	Batch code
	Manufacturer
	Keep Away from Sunlight
	Temperature Limit
	In Vitro Diagnostic Medical device
	Authorized Representative in the European Community
	CE Mark
	Consult Instructions for use
	Do not freeze
	Contains sufficient for <n> tests
	Biological risks
	Do not use if package is damaged
	Date of manufacture
	Do Not Reuse

Reference

1. Yang Huijian, Lian, Tian Xiangting, et al. Study on the correlation between plasma malondialdehyde and high sensitivity C-reactive protein and acute myocardial infarction [J]. Modern Hospital, 2011,1 (7) : 35-37.
2. Powell L J.C-reactive protein a review[J].Am J Med Technol,1979,45(2):138-142.
3. Wu Xueyi, Xu Shujing, Shi Lixin. The relationship between ankle-brachial index and C-reactive protein, white blood cell count in type 2 diabetes patients [J]. Journal of Use Medicine, 2011,27 (5) : 819-820.

Approval Date &Revision Date

Approval Date: Aug. 9,2022

工艺:70g双胶纸,双面印刷,横向4折,竖向对折 展开尺寸:32\*25cm