

ORDER INFORMATION

CODE : DL4101: 25 Test
DL4102: 50 Test
DL4103: 100 Test

DELTA C - REACTIVE PROTEIN Latex Method

This diagnostic reagent kit is used for "in-vitro" determination of C - Reactive Protein in serum by qualitative and semi quantitative latex slide method.

PRINCIPLE OF THE METHOD :

The CRP - latex is a slide agglutination test for the qualitative and semi-quantitative detection of C - Reactive Protein (CRP) in human serum. Latex particles coated with goat IgG anti-human CRP are agglutinated when mixed with samples containing CRP.

CLINICAL SIGNIFICANCE :

C-reactive protein (CRP) is a serum Protein which is synthesized in liver. The rate of synthesis and secretion increases within hours of an acute injury or the onset of inflammation and may reach as high as 20 times the normal level. Elevated serum CRP concentration is an unequivocal evidence of an active tissue damage process and CRP measurement thus provides a simple screening test of organic disorders. Apart from indicating inflammatory disorders CRP measurement helps in differential diagnosis, in the management of neonatal septicemia and meningitis where standard microbiological investigation are difficult. Serum CRP level also provides useful information in patients with myocardial infarction.

REAGENTS :

Reagent 1: CRP Latex Antigen
Reagent 2: Positive Control
Reagent 3: Negative Control

STORAGE AND STABILITY :

CRP Latex Antigen, Positive and Negative control are ready to use.

All the components of the kit are stable until the expiration date mentioned on the individual label when stored tightly closed at 2-8°C and contaminations are prevented during their use. Do not use reagents over the expiration date.

Do not freeze. Frozen latex and diluent could change the functionality of the test.

SAMPLES:

Only serum should be used.

Lipemic, haemolysed and contaminated serum could produce non-specific results.

In case of delay the sample should be stored at 2°-8°C. Sample for CRP test can be stored for one week.

PROCEDURE FOR QUALITATIVE SLIDE TEST:

Allow all reagents as well as the sample to reach room temperature.

- Using disposable plastic dropper place one drop of test specimen in circled area of the plastic slide provided in the kit.
- Shake the Latex reagent well. Add one drop of CRP Latex Reagent to the above drop and mix well with disposable applicator stick.
- Rock the slide gently back and forth for two minutes and observe for agglutination microscopically after two minutes.
- For Positive & Negative Controls follow the same Procedure as mentioned above by taking control serum from respective vials.

RESULT INTERPRETATION FOR QUALITATIVE SLIDE TEST:

Agglutination is a positive test result and indicates presence of CRP in the test serum.

No agglutination is a negative test result and indicates absence of CRP in the test serum.

PROCEDURE FOR SEMI QUANTITATIVE TEST:

- Dilute the specimen serially in the ratio of 1:2, 1:4, 1:8, 1:16, 1:32 and 1:64 using Normal Saline.
- Place one drop of diluted sample using plastic droppers in each circle of the plastic slide.
- Shake the Latex reagent well. Add one drop of CRP Latex reagent in each of these circle. Mix well with applicator stick.
- Rock the slide gently back and forth for two minutes and observe for agglutination microscopically after two minutes.

RESULT CALCULATIONS FOR SEMI QUANTITATIVE TEST:

Agglutination in the highest serum dilution corresponds to the approximate amount of CRP mg/dl present in serum.

Concentration of CRP can be calculated as follows:

$$\text{CRP (mg/dl)} = \text{CRP sensitivity (mg/dl)} \times \text{D}$$

Where CRP sensitivity = 0.6 mg/dl

D = highest dilution of serum showing agglutination

LIMITATIONS:

The increase in CRP level is generally associated with many conditions like Rheumatic diseases, Pregnancy, use of oral contraceptives, Myocardial infarction etc. Therefore care should be taken before concluding the final result of the test.

PRECAUTIONS:

- Contaminated sera and longer reaction time will lead to false Positive results.
- Improper mixing and drying of reagents will lead to erroneous results.
- Do not perform the test directly under the air flow.
- Do not interchange the dropper of bottles.
- Care should be taken to empty the dropper after every use.
- The Latex Gammaglobulin Reagent vial should be properly closed to avoid drying and formation of flakes when stored at 2-8°. Do not freeze it or leave it at room temperature for long period.
- Specimen bottles or tubes and the test slides must be free from detergents.
- Use positive and negative controls for greater proficiency of result interpretation.

NOTES :

Clinical diagnosis should not be made on findings of a single test result, but should integrate both clinical and laboratory data.

BIBLIOGRAPHY :

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