



PRINCIPLE

Serum C-Reactive Protein (CRP) causes visible agglutination on the slide of suspension of latex particles with anti-human C-Reactive Protein

CLINICAL SIGNIFICANCE

C-Reactive Protein (CRP), which is synthesised in the liver is one of the most sensitive phase reactants after tissue damage or inflammation. CRP activates the classical complement pathway as a response to the inflammatory reaction. CRP levels in plasma can raise dramatically after Myocardial Infraction, stress, trauma, infection, inflammation, surgery. The increase occurs within 24-48 hrs and the level may be 2000 times normal. An elevation can be expected in all diseases involving tissue damage, so findings are non-specific.

SAMPLE COLLECTION & STORAGE

- ✓ Fresh clear Serum is preferred
- ✓ Store at 2-8 degrees temperature
- ✓ Do not use Plasma! Hemolysed /Lipemic samples

PRECAUTIONS

- * Bring all reagents to room temperature before use & shake well the Latex reagent before use
- * Do not freeze the Latex reagent or exposure to extreme temperature
- * improper mixing of the reagent with sample leads to erroneous results
- * Use of Positive and Negative controls provided enables greater proficiency of the results
- * Latex reagent should be completely released from the dropper before capping to avoid drying and formation of flakes upon storage at 2-8°C
- * **Do not read the results after 2 minutes**

KIT CONTENTS & STORAGE	25T	2X50T
CRP Latex Reagent	1Vial	2 vials
Positive Control	1 Vial	1Vial
Negative Control	1 Via	1Vial
Glass Slide	1NO	1NO
Sample dropper with teat	25 Nos	100Nos
Mixing Sticks	25 Nos	100Nos

All reagents are to be stored at 2-8°C and stable till expiry date mentioned.

REAGENT PREPARATION

All reagents are ready to use

PROCEDURE

A) Qualitative Method

1. Place one drop of Serum, Positive, Negative Controls in separate test circle of the glass slide.
2. After swirling the ASO Latex antigen suspension, place one drop in each circle
3. Mix well with the disposable mixing sticks provided
4. Rock the slide gently for 2 minutes and observe for agglutination and read results

RESULTS

No Agglutination : NEGATIVE
Agglutination within 2 minutes : POSITIVE

B) Semi quantitative Method

1. Dilute the specimen serially 1:2, 1:4, 1:8, 1:16 using normal saline
2. Place one drop of each diluted Serum in separate test circle of the glass slide
3. After swirling the Latex antigen suspension, place one drop in 830° circle
4. Mix well with the disposable Mixing stick provided
5. Rock the slide gently for 2 minutes and observe for agglutination

RESULTS

Agglutination in the highest specimen dilution within 2 minutes corresponds to CRP titre in the specimen.

The concentration at A80 can be doubted as follows:

CRP in mg/dl DxS

D = Highest dilution showing dear cut agglutination

S= Sensitivity of the test: 0.6 mg/dl

LIMITATIONS

As with all diagnostic tests , the final diagnosis should be based on correlation of test result with other clinical symptoms & findings.

Bibilography:

1. Singer JM Plotz CM, Pader E, Elster Sk. The latex fixation test III, Agglutination test for CRP and comparision with capillary precipitation method. Am.J. Clin Pathol 1957; 281611
2. Hokama Y, Nakumura RM. C-Reactive protein: current status and future perspectives. J Clin Anal 1987; 1:15-27
3. Friedman and Young. Effects of disease on clincoal laboratory tests, 3thed AACC press, 1997
4. Immunology and Serology in Laboratory Medicine, 2nd Edition, Turgeon ML Mosby, 1996