

Anti-HBc IgM – [Serum] Analysis

Objective

The objective of this test is to detect IgM antibodies against the hepatitis B core antigen (Anti-HBc IgM) in serum. This test helps in diagnosing acute or recent hepatitis B virus (HBV) infection and differentiating it from chronic or past infections.

Materials and Methods

Materials:

- Serum sample from patient
- ELISA or chemiluminescent immunoassay kits for Anti-HBc IgM
- Microplate reader or automated analyzer
- Standard laboratory equipment (pipettes, centrifuge)

Methods:

1. Sample Collection: Collect venous blood and separate serum by centrifugation.
2. Antibody Detection: Perform ELISA or CLIA to detect Anti-HBc IgM levels.
3. Interpretation: Positive IgM results indicate acute or recent HBV infection; negative results suggest chronic or past infection.
4. Quality Control: Use positive and negative controls provided with the kit for result validation.
5. Correlation: Combine with HBsAg and Anti-HBs testing for comprehensive HBV diagnosis.

Results

- Negative: No Anti-HBc IgM detected (no acute HBV infection)
- Positive: Anti-HBc IgM detected (suggests acute or recent HBV infection)
- Interpretation requires correlation with clinical symptoms and other HBV markers

Conclusion

Anti-HBc IgM testing is a vital tool for identifying acute or recent hepatitis B infection. It is essential for early diagnosis, clinical management, and differentiating between new infections and chronic HBV carriers.