Lab Dept:	**Serology**
Test Name:	**HEPATITIS Bc TOTAL ANTIBODY, REFLEX TO IGM, SERUM (ANTI-HBc)**

General Information

Lab Order Codes:	HBC
Synonyms:	Hepatitis B Core Viral Antibody, Serum; HBc Total Ab, w/Reflex, S; Hepatitis B Core IgG/IgM Antibody; Anti-HBC; HBcAb; Mayo CORAB
CPT Codes:	86704 – Hepatitis B core antibody (HbcAb); total 86705 (if appropriate)
Test Includes:	If hepatitis B core (HBc) total antibodies is positive, then HBc IgM is performed at an additional charge.

Logistics

Test Indications:	Differentiation between acute and chronic hepatitis B infection. Diagnosis of acute hepatitis B infection in the “core window” when HbsAg and anti HBs are negative. Discriminating between HbsAg-positive patients (carriers) whose acute hepatitis is due to HBV infection and those whose acute hepatitis is due to other causes. Because low titer of IgM anti-Hbc can be either absent or present in chronic HBV carriers, IgM anti-HBc assessment is not usually considered useful in diagnosing chronic active or chronic persistent hepatitis B. This test is not useful for demonstration of immunity to or recovery from hepatitis B viral infection.
Lab Testing Sections:	Serology - Sendouts
Referred to:	Mayo Clinic Laboratories (Test: CORAB)
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours
Turnaround Time:	1 - 3 days, test performed Monday-Saturday.
Special Instructions:	This test is not offered as a screening or confirmatory test for blood donor specimens.

Specimen

Specimen Type:	Blood
Container:	SST (Gold or Marble)
Draw Volume:	2.2 mL (Minimum: 1.8 mL) blood
Processed Volume:	0.7 mL (Minimum: 0.6 mL) serum
Collection:	Routine venipuncture
Special Processing:	Lab Staff: Centrifuge specimen, remove serum/plasma from clot within 2 hours. Place serum aliquot into a screw-capped round bottom plastic vial. Store and ship at frozen temperatures. Forward promptly. Specimen stable frozen (preferred) for 90 days, refrigerated for 6 days, ambient for 72 hours.
Patient Preparation:	For 24 hours before specimen collection, patient should not take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7).
Sample Rejection:	Specimens other than serum; gross hemolysis, lipemia or icterus; unlabeled or mislabeled specimens.

Interpretive

Reference Range:	Negative (reported as positive, negative or inconclusive) Interpretation: Positive antibodies to hepatitis B core antigen (anti-HBc) total result may indicate recent, past/resolved, or chronic hepatitis B viral (HBV) infection. Testing for anti-HBc IgM (HBIM / Hepatitis B Core Antibody, IgM, Serum) is necessary to confirm the presence of acute or recent hepatitis B. A positive anti-HBc total result with a negative anti-HBc IgM result indicates past or chronic HBV infection. Differentiation between past/resolved and chronic hepatitis B can be based on the presence of hepatitis B surface antigen (HBsAg) in the latter condition. Negative anti-HBc total results indicate the absence of recent, past/resolved, or chronic hepatitis B. An inconclusive result for HBc total suggests presence of interfering substance in the patient's serum specimen. Positive antibodies to anti-HBc total results with negative anti-HBc IgM results in infants younger than 18 months may be due to passively acquired maternal IgG antibodies. Additional testing, such as HBsAg, anti-HBc IgM, and hepatitis Be antigen, are necessary to confirm a diagnosis of acute or recent hepatitis B in these infants.

Critical Values: N/A

Limitations:

Specimens containing sodium azide may cause false-positive results and should not be tested. Lipemic and precipitated samples may give inconsistent results.

Serum specimens from individuals taking biotin supplements of 20 mg or more per day may have false-positive hepatitis B core total antibody test results due to interference of biotin with the assay. Such individuals should stop taking these biotin-containing dietary supplements for a minimum of 12 hours before blood collection for this test.

Performance characteristics have not been established for the following specimen characteristics:
-Patients younger than 21 years, pregnant women, or in populations of immunocompromised or immunosuppressed patients
-Grossly icteric (total bilirubin level of >25 mg/dL)
-Grossly lipemic (intralipid level of >1000 mg/dL)
-Grossly hemolyzed (hemoglobin level of >800 mg/dL)
-Containing particulate matter
-Cadaveric specimen
-Heat-inactivated specimen

Methodology: Electrochemiluminescence Immunoassay (ECLIA)

References: Mayo Clinic Laboratories April 2024

Updates:

4/6/2004: Test moved from Memorial Blood Center of Minneapolis to Mayo Medical Laboratories. Test is now an automatic reflex to the IgM specific Anti-HBc.
3/15/2005: Updated test method for Hepatitis Bc IgM antibody. Previously listed as Microparticle Enzyme Immunoassay (MEIA).
8/10/2005: Test no longer reflexes to Hepatitis B Core IgM Specific test when Hepatitis Bc Ab is positive. The IgM specific test must be ordered separately if desired. Note: Change in methodology previously listed as Enzyme Immunoassay (EIA).
8/26/2015: EDTA specimens no longer acceptable.
1/16/2017: Update to SST.
1/8/2018: Updated Reference Range and Limitations per Mayo.
7/24/2023: Corrected Mayo test code, added stability, updated interpretation, updated turnaround time, clarified test name to more closely match Mayo's catalog.
4/23/2024: Updated optimal and minimum specimen volumes, changed methodology, updated limitations, updated specimen stability.