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**Lab Dept:** Serology

**Test Name:** EBV EARLY ANTIGEN IGG ANTIBODY

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***General Information***

**Lab Order Codes:** EBVE

**Synonyms:** Epstein-Barr Virus (EBV) IgG Antibody to Early Antigen, Serum; Early Antigen; EA; E. B. Virus Early Antigen; Epstein Barr Virus Early Ag Aby

**CPT Codes:** 86663 – Antibody; Epstein-Barr Virus, Early Antigen

**Test Includes:** IgG antibody level for Epstein Barr Virus, Early Antigen

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***Logistics***

**Test Indications:** A third-order test in the diagnosis of infectious mononucleosi, especially in situations when initial testing results (heterophile antibody test) are negative and follow-up testing (viral capsid antigen:VCA IgG, VCA IgM, and Epstein-Barr nuclear antigen) yields inconclusive results aiding in the diagnosis of type 2 or type 3 nasopharyngeal carcinoma.

**Lab Testing Sections:** Serology – Sendouts

**Referred to:** Mayo Medical Laboratories (Test: EBVE)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1 - 3 days; test set up Monday - Friday

**Special Instructions:** N/A

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***Specimen***

**Specimen Type:** Blood

**Container:** SST (Gold, marble or red) tube

**Draw Volume:** 3 mL (Minimum: 1.2 mL) blood

**Processed Volume:** 1 mL (Minimum: 0.4 mL) serum

<b>Collection:</b>	Routine venipuncture
<b>Special Processing:</b>	Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial and store refrigerated. Ship refrigerated. Forward promptly.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Specimens other than serum; mislabeled or unlabeled specimens; gross hemolysis; gross lipemia; heat-activated specimen

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### ***Interpretive***

**Reference Range:** Negative (reported as positive or negative)

Interpretation: The presence of antibody to early antigen (EA) of Epstein-Barr virus (EBV) indicates that EBV is actively replicating.

Generally, this antibody can only be detected during active EBV infection, such as in patients with infectious mononucleosis. Clinical studies have indicated that patients who have chronic active or reactivated EBV infection commonly have elevated levels of IgG-class antibodies to the EA of EBV.

IgG antibody specific for the diffuse early antigen of EBV is often found in patients with nasopharyngeal carcinoma (NPC). Of patients with type 2 or 3 NPC (World Health Organization classification), 94% and 83% respectively, have positive-antibody responses to EA. Only 35% of patients with type 1 NPC have a positive response. The specificity of the test is such that 82% to 91% of healthy blood donor controls and patients who do not have HPC have negative responses (9% - 18% false positives). Although this level of specificity is useful for diagnostic purposes, the false-positive rate indicates that the test is not useful for NPC screening.

**Critical Values:** N/A

**Limitations:** This test detects the diffuse components of early antigen only.

**Methodology:** Multiplex Flow Immunoassay

**References:** [Mayo Medical Laboratories](#) November 2017

**Updates:** 11/7/2017: Updated collection container