# Lab Dept: Serology

## Test Name: BETA-2 GLYCOPROTEIN 1 (IgG, IgM) ANTIBODY PANEL

### General Information

**Lab Order Codes:** B2GP1  

**Synonyms:** B2GP1 (Beta-2 Glycoprotein 1); Beta-2 GP1 Ab Panel, Serum; Beta 2 GP1 Ab IgG; Beta 2 GP1 Ab IgM  

**CPT Codes:** 86146 x 2 - Beta 2 glycoprotein 1 antibody, each  

**Test Includes:** Beta 2 GP1 Ab IgG, and IgM antibodies

### Logistics

**Test Indications:** Testing for beta-2 GP1 antibodies may be useful in the following clinical situations:

- Unexplained arterial or venous thrombosis  
- A history of pregnancy morbidity defined as 1 or more unexplained deaths of a morphologically normal fetus beyond the 10th week of gestation, 1 or more premature births before 34 weeks of gestation caused by severe preeclampsia or placental insufficiency, or 3 or more unexplained, consecutive spontaneous abortions before the 10th week of gestation with no identifiable maternal hormonal or anatomic, or maternal or paternal chromosomal causes.  
- Presence of an unexplained cutaneous circulatory disturbance, eg, livido reticularis or pyoderma gangrenosum.  
- Unexplained thrombocytopenia or hemolytic anemia  
- Possible nonbacterial, thrombotic endocarditis

**Lab Testing Sections:** Serology - Sendouts  

**Referred to:** Mayo Medical Laboratories (MML Test: B2GMG)

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

STP Lab: 651-220-6550  

**Test Availability:** Daily, 24 hours  

**Turnaround Time:** 1 - 6 days, performed Monday - Saturday  

**Special Instructions:** N/A
**Specimen**

**Specimen Type:** Blood

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

**Draw Volume:** 1.5 mL (Minimum: 1.2 mL) blood

**Processed Volume:** 0.5 mL (Minimum: 0.4 mL) serum

**Collection:** Routine venipuncture

**Special Processing:** Lab Staff: Centrifuge specimen, remove serum aliquot into a plastic screw-capped vial. Store and ship at refrigerated temperatures.

Serum specimen stable refrigerated (preferred) and frozen for 21 days.

**Patient Preparation:** None

**Sample Rejection:** Mislabeled or unlabeled specimens; gross hemolysis; gross lipemia

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### Interpretive

**IgG Range (All ages)**

<table>
<thead>
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<th>Interpretation</th>
</tr>
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<tr>
<td>&lt;15.0 SGU/mL</td>
<td>Negative</td>
</tr>
<tr>
<td>15.0 - 39.9 SGU/mL</td>
<td>Weakly positive</td>
</tr>
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<td>40.0 – 79.9 SGU/mL</td>
<td>Positive</td>
</tr>
<tr>
<td>≥80.0 SGU/mL</td>
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Results are reported in standard IgG anti-beta 2 GP1 units (SGU)

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**IgM Range (All ages)**

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Results are reported in standard IgM anti-beta 2 GP1 units (SMU)
Critical Values: N/A

Limitations: The immunoassay for beta-2 glycoprotein (beta-2 GP1) antibodies does not distinguish between autoantibodies and antibodies produced in response to infectious agents or as epiphenomena following thrombosis. For this reason, a single positive test result is not sufficient to meet accepted serologic criteria for the diagnosis of antiphospholipid syndrome.

Comparative studies and interlaboratory proficiency surveys indicate that results of beta-2 GP1 antibody tests can be highly variable and results obtained with different commercial immunoassays may yield substantially different results.

Methodology: Enzyme-Linked Immunosorbent Assay (ELISA)

References: Mayo Medical Laboratories March 2023

Updates: 7/9/2014: IgA is no longer performed as a part of this panel. Current guidelines include only IgG/IgM isotypes for the classification of antiphosphid syndrome (APS).
3/1/2017: Reference range change due to implementation of new kit.
3/15/2023: Units of measure changed for IgM and IgG, added specimen stability.