Lab Dept: Chemistry

Test Name: GROWTH HORMONE, SINGLE, SERUM

**General Information**

Lab Order Codes: HGH

Synonyms: HGH; Somatotropin

CPT Codes: 83003 - Growth hormone, human (HGH)

Test Includes: Single growth hormone level reported in ng/mL.

**Logistics**

Test Indications: Excess Growth Hormone secretion is associated with acromegaly in adults or pituitary gigantism in children, while a deficiency may cause short stature in children.

Lab Testing Sections: Chemistry (St. Paul Campus)

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 - Friday

Special Instructions: Follow physician’s protocol for administering provocative stimuli and drawing specimens. See Patient Preparation.

**Specimen**

Specimen Type: Blood

Container: SST (Gold, marble or red) preferred
Alternate: Lavender EDTA or Green Heparin

Draw Volume: 1.5 mL (Minimum: 0.6 mL) blood

Processed Volume: 0.5 mL (Minimum: 0.2 mL) serum

Collection: Routine venipuncture or line draw
Special Processing: Lab Staff: Centrifuge specimen within 1 hour of draw, remove serum aliquot into a screw-capped round bottom plastic vial. Freeze immediately. Ship to St. Paul frozen.

Patient Preparation: See Special Instructions. In addition, patient must be fasting and at complete rest 30 minutes before blood collection.

Sample Rejection: Mislabeled or unlabeled specimens; improper storage; gross hemolysis

**Interpretive**

<table>
<thead>
<tr>
<th>Reference Range:</th>
<th>Age</th>
<th>Result Range</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0 - 1 day</td>
<td>5 - 53 ng/mL</td>
</tr>
<tr>
<td></td>
<td>1 day - 1 week</td>
<td>5 - 27 ng/mL</td>
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<tr>
<td></td>
<td>2 weeks - 12 months</td>
<td>2 - 10 ng/mL</td>
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<tr>
<td></td>
<td>&gt;12 months:</td>
<td>0 – 6 ng/mL</td>
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**Response Testing (Children and Adults):** Following provocative stimuli, a normal response is a rise to 10 ng/mL or greater. Intermediate values between 7 ng/mL and 10 ng/mL may indicate a partial deficiency and require further evaluation.

**Critical Values:** N/A

**Limitations:** Patients on hGH therapy may develop human antibodies to hGH that will interfere with the test and cause falsely low levels.

**Methodology:** Chemiluminescent competitive immunoassay

**References:**

- Siemens Immulite Recombinant 98/574 hGH product insert (09/08/2010) PIL2KGRH-7
- Expected Values and S.I. Unit Conversion Tables, 2nd Edition, Endocrine Sciences, 4301 Lost Hills Rd, Calabasas Hills, CA 91301


**Updates:**

10/7/2016: Updated tube type.
6/26/2017: Added alternate tube types.