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**Lab Dept:** Chemistry

**Test Name:** IGG (IMMUNOGLOBIN G)

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***General Information***

**Lab Order Codes:** IGG

**Synonyms:** Immunoglobulin G

**CPT Codes:** 82784 – Gammaglobulin; IgG, each

**Test Includes:** IgG concentration reported in mg/dL.

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***Logistics***

**Test Indications:** Immunoglobulins, also known as humoral antibodies, recognize antigens and initiate mechanisms that destroy antigens. The major immunoglobulin produced by plasma cells is IgG, which makes up 70-75% of the total immunoglobulins. The major function of IgG appears to be neutralization of toxins (bacterial or viral) in tissue spaces.

**Lab Testing Sections:** Chemistry

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

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1 day

**Special Instructions:** N/A

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***Specimen***

**Specimen Type:** Blood

**Container:** Green top (Li Heparin) tube, preferred  
Alternate: Red, marble or gold top tube

**Draw Volume:** 0.6 mL blood

**Processed Volume:** 0.2 mL serum/plasma

**Collection:** Routine venipuncture

**Special Processing:** Lab Staff: Centrifuge specimen, remove aliquot into a plastic sample cup. Specimens can be stored at refrigerated temperatures for 7 days. Centrifuge turbid or particulate samples prior to analysis.

**Patient Preparation:** None

**Sample Rejection:** Mislabeled or unlabeled specimen, turbid samples that do not clear after centrifugation

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***Interpretive***

**Reference Range:**

<b>Age:</b>	<b>Range (mg/dL):</b>
0 - <15 days:	320 - 1407 mg/dL
15 days - <1 year:	108 - 702 mg/dL
1 - <4 years:	316 - 1148 mg/dL
4 - <10 years::	542 - 1358 mg/dL
10 - <19 years:	658 - 1534 mg/dL
Adult Male:	540 - 1822 mg/dL
Adult Female:	552 - 1631 mg/dL

**Critical Values:** N/A

**Limitations:** Results from samples containing paraproteins (abnormal monoclonal antibodies) may incorrectly fall within the reference range. Samples with elevated total protein concentrations or samples from patients with suspected paraproteinemia can be screened using other laboratory methods such as protein electrophoresis. In addition, analysis of one or more diluted samples should be performed to ensure that consistent results are obtained. Specimens collected in EDTA collection tubes are not acceptable for use. Results should be evaluated by comparing to other clinically relevant information.

Turbidity and particles in samples can interfere with the assay. Therefore, particulate matter should be removed by centrifugation prior to running the assay.

**Methodology:** Immunoturbidimetric

**References:** Tietz, Norbert (1999) Textbook of Clinical Chemistry, 3<sup>rd</sup> edition, Philadelphia, WB Saunders Co, pp 507-509

Bio-Rad Liquichek Immunology Control Package Insert, Bio-Rad Laboratories, Irvine, CA, USA

CALIPER Reference Range Studies. Accessed October 27, 2020

Abbott Alinity c Specific Protein Calibrator Package Insert, Abbott Diagnostics Division, Abbott Park, IL, 60064, USA, February 2018

Abbott Alinity c IgG Reagent Kit Instructions for Use, Abbott Diagnostics Division, Abbott Park, IL, 60064, USA. Revised June 2019

**Updates:**

2/8/2016: Update alt tube types

11/23/2020: Updated for Method Abbott, Siemens Vista removed.

10/28/2022: Updated reference range from <1 year to <15 days.