**Collection / Transport**

**Collection Requirements:**
Red top tube or SST

**Specimen Preparation:**
Allow sample to clot at room temperature for 20 to 60 minutes. Centrifuge ASAP to separate serum from cells and aliquot cell-free serum into a labeled polypropylene or similar plastic tube.

**Patient Preparation:**
None

**Pediatric Collection:**
0.5 mL

**Unacceptable Conditions:**
Clotted or hemolyzed samples, plasma

**Storage Transport Temp:**
Send serum Priority Overnight via FedEx and in a well insulated container with an ice pack or frozen on dry ice.

**Stability:**
2-8°C for 48 hours, >1 month at -70°C

**Overview**

**Performed:**
Mon-Fri

**Methodology:**
ELISA followed by confirmation by flow cytometry.

**Reported:**
14 days

**Lab Department:**
Immunology Lab - Functional Assay
Result Interpretation

Reference Interval:
Negative

Interpretive Data:
Granulocyte-macrophage colony-stimulating factor (GM-CSF) promotes the proliferation and differentiation of hematopoetic cells including macrophages, neutrophils and dendritic cells. Neutralization of GM-CSF activity can therefore impair the development and/or function of these cell types.

Neutralizing anti-GM-CSF autoantibodies are associated with pulmonary alveolar proteinosis (PAP), a rare lung disease that is characterized by the inability of macrophages to clear surfactant from the alveolar lung spaces. Additionally, anti-GM-CSF autoantibodies have been noted in patients with opportunistic infections with intracellular organisms such as M. avium complex, Cryptococcus, Nocardia and Aspergillus species. It is possible that neutralization of GM-CSF in vivo leads to compromised macrophage function which is a key component of the immune response to intracellular organisms.

Anti-GM-CSF autoantibodies are detected by an initial screening ELISA. If the result is positive, the test reflexes to a flow cytometry assay to determine the ability of the autoantibody to neutralize GM-CSF. Low titer, non-neutralizing autoantibodies may be detected in healthy individuals. Clinically significant anti-GM-CSF autoantibodies are reported when both the ELISA and the ability to neutralize GM-CSF are positive.

References:

CPT Codes

CPT Code:
- 83516- ELISA
- 86353,88184,88185- Flow reflex

Test Name: GMCSF Elisa