
Lab Dept: Serology

Test Name: STREPTOCOCCUS PNEUMONIAE IGG, SERUM

General Information

Lab Order Codes: PN23M

Synonyms: *Streptococcus pneumoniae* IgG Antibodies, 23 Serotypes; Pneumococcal antibody

CPT Codes: 86317 x23 – Immunoassay for infectious agent antibody, quantitative, not otherwise specified

Test Includes: *Streptococcus pneumoniae* antibodies to serotypes 1, 2, 3, 4, 5, 8, 9N, 12F, 14, 17F, 19F, 20, 22F, 23F, 6B, 10A, 11A, 7F, 15B, 18C, 19A, 9V, 33F

Logistics

Test indications: This test is useful for:

- Assessing the IgG antibody response to active immunization with nonconjugated, 23-valent pneumococcal vaccines
- Assessing the IgG antibody response to active immunization with conjugated 13-valent, 15-valent and 20-valent pneumococcal vaccines
- Determining the ability of an individual to produce an antibody response to polysaccharide antigens, as part of the evaluation for humoral or combined immunodeficiencies.

This test is the preferred test for patients previously tested for *Streptococcus pneumoniae* serotypes (as part of follow up testing or part of pre/post vaccine assessment). The preferred test for patients being evaluated for possible immunodeficiency or for assessment of pneumococcal vaccination response (initial evaluation) is Mayo's test code PNTOR *Streptococcus pneumoniae* IgG Antibodies, Total, with Reflex, Serum. The preferred test for patients previously tested for total *Streptococcus pneumoniae* antibodies (as part of follow up testing or part of pre/post vaccine assessment) is Mayo's test code PNT0 *Streptococcus pneumoniae* IgG Antibodies, Total, Serum.

Lab Testing Sections: Serology-Sendouts

Referred to: Mayo Clinic Laboratories (MML Test: PN23M)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours
Turnaround Time: 4-6 days, test performed Monday through Friday
Special Instructions: N/A

Specimen

Specimen Type: Blood

Container: SST (Marble, gold or red top gel separator tube)

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

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

Note: Submission of the minimum volume does not allow for repeat analysis and may result in a QNS (quantity not sufficient) test result.

Collection: Routine venipuncture

Special Processing: Lab Staff: Centrifuge specimen, remove serum to plastic vial and refrigerate. Store and ship at refrigerated temperatures.
Serum stable refrigerated (preferred) or frozen for 21 days.

Patient Preparation: N/A

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

Interpretive

Reference Range:

Serotype:	Normal Value (mcg/mL)
1 (1)	>=1.0
2 (2)	>=1.0
3 (3)	>=1.0
4 (4)	>=1.0
5 (5)	>=1.0
6B (26)	>=1.0
7F (51)	>=1.0
8 (8)	>=1.0
9N (9)	>=1.0
9V (68)	>=1.0
10A (34)	>=1.0
11A (43)	>=1.0
12F (12)	>=1.0
14 (14)	>=1.0
15B (54)	>=1.0
17F (17)	>=1.0
18C (56)	>=1.0
19A (57)	>=1.0
19F (19)	>=1.0
20 (20)	>=1.0
22F (22)	>=1.0
23F (23)	>=1.0
33F (70)	>=1.0

Critical Values:

N/A

Limitations:

The humoral immune response to *Streptococcal pneumoniae* vaccination is affected by multiple factors, including age, immune status, vaccination history, prior infections, and carrier status. Protective concentrations of IgG antibodies, or those required to prevent infection from *S. pneumoniae*, have not been defined for any serotype. Quantitation of the IgG antibody response to pneumococcal serotypes does not provide any information on the functional capacity of the serotype-specific antibodies generated

(opsonization efficiency). IgG antibodies specific for the 23 serotypes included in PPSV23 are measured in this test; except for serotype 6A, IgG antibodies specific for all the serotypes in PCV13, PCV15, and PCV20 are measured in this test.

Methodology: Microsphere Photometry

References: [Test Catalog - Mayo Clinic Laboratories \(mayocliniclabs.com\)](https://www.mayocliniclabs.com/test-catalog) August 2023

Updates: 08/03/2023: Initial entry. New order replacing obsolete test (MOCA).