Client: Example Client ABC123
123 Test Drive
Salt Lake City, UT 84108
UNITED STATES

Physician: Doctor, Example

Patient: Patient, Example

DOB	3/21/2004
Gender:	Male
Patient Identifiers:	01234567890ABCD, 012345
Visit Number (FIN):	01234567890ABCD
Collection Date:	00/00/0000 00:00

Humoral Immunity Panel II

ARUP test code 0050981

Diphtheria Antibody, IgG	0.0 IU/mL INTERPRETIVE INFORMATION: Diphtheria Ab, IgG Antibody concentration of greater than 0.1 IU/mL is usually considered protective. Responder status is determined according to the ratio of a one month post-vaccination sample to pre-vaccination concentrations of Diphtheria IgG Abs as follows: 1. If the one month post-vaccination concentration is less than 1.0 IU/mL, the patient is considered to be a non-responder. 2. If the post-vaccination concentration is greater than or equal to 1.0 IU/mL, a patient with a ratio of less than 1.5 is a non-responder, a ratio of 1.5 to less than 3.0, a weak responder, and a ratio of 3.0 or greater, a good responder. 3. If the pre-vaccination concentration is greater than 1.0 IU/mL, it may be difficult to assess the response based on a ratio alone. A post-vaccination concentration above 2.5 IU/mL in this case is usually adequate. This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.
Tetanus Antibody, IgG	0.1 IU/mL

H=High, L=Low, *=Abnormal, C=Critical

	INTERPRETIVE INFORMATION: Tetanus Ab, IgG Antibody concentration of greater than 0.1 IU/mL is usually considered protective. Responder status is determined according to the ratio of a one-month post-vaccination sample to pre-vaccination concentration of Tetanus IgG Abs as follows: 1. If the one month post-vaccination concentration is less than 1.0 IU/mL, the patient is considered a non-responder. 2. If the post-vaccination concentration is greater than or equal to 1.0 IU/mL, a patient with a ratio of less than 1.5 is a non-responder, a ratio of 1.5 to less than 3.0, a weak responder, and a ratio of 3.0 or greater, a good responder. 3. If the pre-vaccination concentration is greater than 1.0 IU/mL, it may be difficult to assess the response based on a ratio alone. A post-vaccination concentration above 2.5 IU/mL in this case is usually adequate. This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.
Pneumo serotype 1 IgG (P13,PNX)	0.04 ug/mL
Pneumo serotype 3 IgG (P13,PNX)	0.33 ug/mL
Pneumo serotype 4 IgG (P7,P13,PNX)	0.04 ug/mL
Pneumo serotype 5 IgG (P13,PNX)	0.20 ug/mL
Pneumo serotype 6B IgG (P7,P13,PNX)	0.04 ug/mL
Pneumo serotype 7F IgG (P13,PNX)	0.11 ug/mL
Pneumo serotype 8 IgG (PNX)	0.04 ug/mL
Pneumo serotype 9N IgG (PNX)	0.04 ug/mL
Pneumo serotype 9V IgG (P7,P13,PNX)	0.03 ug/mL

H=High, L=Low, *=Abnormal, C=Critical

Pneumo serotype 12F IgG (PNX)	0.03 ug/mL
Pneumo serotype 14 IgG (P7,P13,PNX)	0.17 ug/mL
Pneumo serotype 18C IgG (P7,P13,PNX)	0.06 ug/mL
Pneumo serotype 19F IgG (P7,P13,PNX)	0.41 ug/mL
Pneumo serotype 23F IgG (P7,P13,PNX)	0.08 ug/mL
Pneumo Serotype Interpretation	See Note

INTERPRETIVE INFORMATION: Streptococcus pneumoniae Antibodies, IgG

A pre- and post-vaccination comparison is required to adequately assess the humoral immune response to Prevnar 7 (P7), Prevnar 13 (P13), and/or Pneumovax 23 (PNX) Streptococcus pneumoniae vaccines. Pre-vaccination samples should be collected prior to vaccine administration. Post-vaccination samples should be obtained at least 4 weeks after immunization. Testing of post-vaccination samples alone will provide only general immune status of the individual to various pneumococcal serotypes.

In the case of pure polysaccharide vaccine, indication of immune system competence is further delineated as an adequate response to at least 50 percent of the serotypes in the vaccine challenge for those 2-5 years of age and to at least 70 percent of the serotypes in the vaccine challenge for those 6-65 years of age. Individual immune response may vary based on age, past exposure, immunocompetence, and pneumococcal serotype.

Responder Status	Antibody Ratio
Non-Responder	Less than 2-fold
Weak Responder	2-fold to 4-fold
Good Responder	Greater than 4-fold

A response to 50-70 percent or more of the serotypes in the vaccine challenge is considered a normal humoral response(1). Antibody concentration greater than 1.0 - 1.3 ug/mL is generally considered long-term protection(2).

References:
1. Daly TM, Pickering JW, Zhang X, Prince HE, Hill HR. Multilaboratory assessment of threshold versus fold-change algorithms for minimizing analytical variability in multiplexed pneumococcal IgG measurements. Clin Vaccine Immunol. 2014;21(7):982-8.
2. Daly TM, Hill HR. Use and Clinical Interpretation of Pneumococcal Antibody Measurements in the Evaluation of Humoral Immune Function. Clin Vaccine Immunol. 2015;22(2):148-152.

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VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Diphtheria Antibody, IgG	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Tetanus Antibody, IgG	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 1 IgG (P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 3 IgG (P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 4 IgG (P7,P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 5 IgG (P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 6B IgG (P7,P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 7F IgG (P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 8 IgG (PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 9N IgG (PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 9V IgG (P7,P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 12F IgG (PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 14 IgG (P7,P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 18C IgG (P7,P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 19F IgG (P7,P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo serotype 23F IgG (P7,P13,PNX)	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Pneumo Serotype Interpretation	22-164-114806	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

H=High, L=Low, *=Abnormal, C=Critical