MAYO CLINIC LABORATORIES

Test Definition: SASP

Aspergillus fumigatus, IgG Ab, S

Overview

Useful For

Evaluation of patients suspected of having lung disease caused by *Aspergillus fumigatus*

Method Name

FluorescenceEnzymeImmunoassay(FEIA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

Container/Tube:

Preferred: Serum gel

Acceptable: Red top

Specimen Volume:0.5 mL

Reject Due To

Gross hemolysis	OK
Gross lipemia	OK

Specimen Minimum Volume

0.3 mL

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

Clinical & Interpretive

Clinical Information

Aspergillus fumigatus is one of the causative agents of hypersensitivity pneumonitis (HP), as well as invasive lung disease with cavitation or pneumonitis and allergic bronchopulmonary disease.(1) Other causative microorganisms of HP include *Micropolyspora faeni* and *Thermoactinomyces vulgaris.* The development of HP and allergic bronchopulmonary disease caused by *Aspergillus fumigatus* is accompanied by an immune response to *Aspergillus fumigatus* antigens with

production of IgG or IgE antibodies, respectively. While the immunopathogenesis of HP and allergic bronchopulmonary disease is not known, several immune mechanisms are postulated to play a role, including both cellular and humoral mechanisms.

Reference Values

<4 years: not established
> or =4 years: < or =102 mg/L

Interpretation

Elevated concentrations of IgG antibodies to *Aspergillus fumigatus*, *Thermoactinomyces vulgaris,* or *Micropolyspora faeni* in patients with signs and symptoms of hypersensitivity pneumonitis may be consistent with disease caused by exposure to 1 or more of these organic antigens.

Cautions

IgG antibodies to *Aspergillus fumigatus*, *Thermoactinomyces vulgaris,* or *Micropolyspora faeni* may be found in sera from healthy individuals; the presence of these specific antibodies is not sufficient to establish the diagnosis of hypersensitivity pneumonitis (HP).
Elevated concentration of antibodies to *Aspergillus fumigatus* may be also found in patients with invasive aspergillosis and cavitary lung disease.
The concentrations of antibodies to these antigens may decrease following treatment, although elevated concentrations may persist in treated patients.

Clinical Reference

1. Fink JN, Zacharisen MC: Chapter 69: Hypersensitivity pneumonitis. In Allergy Principles and Practice. Vol 1. Fifth edition. Edited by E Middleton Jr, CE Reed, EF Ellis, et al. St. Louis, Mosby Year Book Inc, 1998
2. Girard M, Lacasse Y, Cormier Y: Hypersensitivity pneumonitis. Allergy 2009;64:322-334
3. Grunes D, Beasley MB: Hypersensitivity pneumonitis: A review and update of histologic findings. J Clin Pathol 2013;66:888-895

Performance

Method Description

The Phadia ImmunoCAP System specific IgG fluorescent enzyme immunoassay (FEIA) provides an in vitro method for measuring the levels of circulating specific IgG antibodies in human blood samples. Specific IgG from the patient's serum reacts with the antigen of interest, which is covalently coupled to an ImmunoCAP. After washing away nonspecific IgG, enzyme-labeled anti-IgG antibodies are added to form a complex. After incubation, unbound enzyme-anti IgG is washed away and the bound complex is then incubated with a developing agent. After stopping the reaction, the fluorescence of the eluate is measured. The fluorescence is proportional to the amount of specific IgG, which is present in the patient's sample, ie, the higher the fluorescence value, the more specific IgG antibody is present.(Package insert: Phadia AB, Uppsala, Sweden 2009)

PDF Report

No

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

Fees & Codes

Test Classification

This test was developed, and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

86606