

Overview

Useful For

Establishing a diagnosis of an allergy to nuts

Defining the allergen responsible for eliciting signs and symptoms

Identifying allergens:

- Responsible for allergic response and/or anaphylactic episode
- To confirm sensitization prior to beginning immunotherapy
- To investigate the specificity of allergic reactions to insect venom allergens, drugs, or chemical allergens

Profile Information

Test Id	Reporting Name	Available Separately	Always Performed
ALM	Almond, IgE	Yes	Yes
SESA	Sesame Seed, IgE	Yes	Yes
PEAN	Peanut, IgE	Yes	Yes
PEC	Pecan-Food, IgE	Yes	Yes
CCNT	Coconut, IgE	Yes	Yes

Special Instructions

- [Allergens - Immunoglobulin E \(IgE\) Antibodies](#)

Method Name

Fluorescence Enzyme Immunoassay (FEIA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Ordering Guidance

For a listing of allergens available for testing, see [Allergens - Immunoglobulin E \(IgE\) Antibodies](#).

Specimen Required

Collection Container/Tube:

**Preferred:** Serum gel

**Acceptable:** Red top

**Submission Container/Tube:** Plastic vial

**Specimen Volume:** 0.5 mL for every 5 allergens requested

**Collection Instructions:** Centrifuge and aliquot serum into a plastic vial.

**Forms**

If not ordering electronically, complete, print, and send an [Allergen Test Request](#) (T236) with the specimen.

**Specimen Minimum Volume**

For 1 allergen: 0.3 mL

For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

**Reject Due To**

Gross hemolysis	OK
Gross lipemia	OK

**Specimen Stability Information**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

**Clinical & Interpretive**

**Clinical Information**

Clinical manifestations of immediate hypersensitivity (allergic) diseases are caused by the release of proinflammatory mediators (histamine, leukotrienes, and prostaglandins) from IgE-sensitized effector cells (mast cells and basophils) when cell-bound IgE antibodies interact with an allergen.

In vitro serum testing for IgE antibodies provides an indication of the immune response to allergens that may be associated with allergic disease.

The allergens chosen for testing often depend upon the age of the patient, history of allergen exposure, season of the year, and clinical manifestations. In individuals predisposed to develop allergic disease, the sequence of sensitization and clinical manifestations proceed as follows: eczema and respiratory disease (rhinitis and bronchospasm) in infants and children younger than 5 years due to food sensitivity (milk, egg, soy, and wheat proteins) followed by respiratory disease (rhinitis and asthma) in older children and adults due to sensitivity to inhalant allergens (dust mite, mold, and pollen inhalants).

**Reference Values**

Class	IgE kU/L	Interpretation
-------	----------	----------------

0	<0.10	Negative
0/1	0.10-0.34	Borderline/Equivocal
1	0.35-0.69	Equivocal
2	0.70-3.49	Positive
3	3.50-17.4	Positive
4	17.5-49.9	Strongly positive
5	50.0-99.9	Strongly positive
6	> or =100	Strongly positive

Reference values apply to all ages.

Interpretation

Detection of IgE antibodies in serum (class 1 or greater) indicates an increased likelihood of allergic disease as opposed to other etiologies and defines the allergens responsible for eliciting signs and symptoms.

The level of IgE antibodies in serum varies directly with the concentration of IgE antibodies expressed as a class score or kU/L.

Cautions

Testing for IgE antibodies is not useful in patients previously treated with immunotherapy to determine if residual clinical sensitivity exists or in patients in whom the medical management does not depend upon identification of allergen specificity.

Some individuals with clinically insignificant sensitivity to allergens may have measurable levels of IgE antibodies in serum, and test results must be interpreted in the clinical context.

False-positive results for IgE antibodies may occur in patients with markedly elevated serum IgE (>2500 kU/L) due to nonspecific binding to allergen solid phases.

Clinical Reference

Homburger HA, Hamilton RG: Chapter 55: Allergic diseases. In: McPherson RA, Pincus MR, eds. Henry's Clinical Diagnosis and Management by Laboratory Methods. 23rd ed. Elsevier; 2017:1057-1070

Performance

Method Description

Specific IgE from the patient's serum reacts with the allergen of interest, which is covalently coupled to an ImmunoCAP. After washing away nonspecific IgE, enzyme-labeled anti-IgE antibody is added to form a complex. After incubation, unbound anti-IgE is washed away, and the bound complex incubated with a developing agent. After stopping the reaction, the fluorescence of the eluate is measured. Fluorescence is proportional to the amount of specific IgE present in the patient's sample (ie, the higher the fluorescence value, the more IgE antibody is present).(Package insert: ImmunoCAP System Specific IgE FEIA. Phadia; Rev 06/2020)

PDF Report

No

Day(s) Performed  
Monday through Friday

Report Available  
Same day/1 to 3 days

Specimen Retention Time  
14 days

Performing Laboratory Location  
Mayo Clinic Laboratories - Rochester Superior Drive

Fees & Codes

- Fees
- Authorized users can sign in to [Test Prices](#) for detailed fee information.
  - Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
  - Prospective clients should contact their account representative. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information  
86003 x 5

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
NUTSP	Nuts Allergen Profile	63486-5

Result ID	Test Result Name	Result LOINC® Value
ALM	Almond, IgE	6019-4
CCNT	Coconut, IgE	6081-4
PEAN	Peanut, IgE	6206-7
PEC	Pecan-Food, IgE	6208-3
SESA	Sesame Seed, IgE	6242-2