Overview

Useful For
Establishing a diagnosis of an allergy to codfish, cow's milk, egg white, peanut, soybean, and wheat

Defining the allergen responsible for eliciting signs and symptoms

Identifying allergens:
- Responsible for allergic disease 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

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.

Testing Algorithm
Includes testing for codfish, cow's milk, egg white, peanut, soybean, and wheat allergen.

Special Instructions
- Allergens - Immunoglobulin E (IgE) Antibodies

Highlights
This multi-allergen IgE antibody panel, combined with measurement of IgE in serum, is an appropriate first-order test for allergic disease.

It requires less specimen volume and less cost for ruling out allergic response; however, individual (single) allergen responses cannot be identified. In cases of a positive test, follow-up testing must be performed to differentiate between individual allergens in the panel.

Note: Only one result is generated for each panel.

Method Name
Fluorescence Enzyme Immunoassay (FEIA)

NY State Available
Yes

Specimen

Specimen Type
Serum

Ordering Guidance
This test uses a pooled allergen reagent; therefore, the multi-allergen Immunocap (panel cap) is reported with a single qualitative class result and concentration. This is the appropriate first-tier test for allergic disease.

For a listing of allergens available for testing, see Allergens - Immunoglobulin E (IgE) Antibodies in Special Instructions

Specimen Required
Container/Tube:
Preferred: Red top
Acceptable: Serum gel
Specimen Volume: 0.5 mL

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

Specimen Minimum Volume
0.3 mL

Reject Due To

<table>
<thead>
<tr>
<th>Gross hemolysis</th>
<th>OK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross lipemia</td>
<td>OK</td>
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</table>

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tbody>
<tr>
<td>Serum</td>
<td>Refrigerated (preferred)</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>90 days</td>
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Clinical & Interpretive

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

In vitro serum testing for IgE antibodies provides an indication of the immune response to allergen(s) 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(s), the sequence of sensitization and clinical manifestations proceed as follows: eczema and respiratory disease (rhinitis and bronchospasm) in infants
and children less 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**

<table>
<thead>
<tr>
<th>Class</th>
<th>IgE kU/L</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>&lt;0.35</td>
<td>Negative</td>
</tr>
<tr>
<td>1</td>
<td>0.35-0.69</td>
<td>Equivocal</td>
</tr>
<tr>
<td>2</td>
<td>0.70-3.49</td>
<td>Positive</td>
</tr>
<tr>
<td>3</td>
<td>3.50-17.4</td>
<td>Positive</td>
</tr>
<tr>
<td>4</td>
<td>17.5-49.9</td>
<td>Strongly positive</td>
</tr>
<tr>
<td>5</td>
<td>50.0-99.9</td>
<td>Strongly positive</td>
</tr>
<tr>
<td>6</td>
<td>&gt; or =100</td>
<td>Strongly positive</td>
</tr>
</tbody>
</table>

Reference values apply to all ages.

**Interpretation**

Positive results indicate the possibility of allergic disease induced by one or more allergens present in the multi-allergen cap.

Negative results may rule out allergy, except in rare cases of allergic disease induced by exposure to a single allergen.

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 that may be 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**

Some individuals with clinically insignificant sensitivity to allergens may have measurable levels of IgE antibodies in serum, and 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.

Since only one result is generated for this panel, individual (single) allergen responses cannot be identified. When this panel is positive, follow-up testing is required to differentiate between individual allergens in the panel.

**Clinical Reference**


**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 is then 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, Uppsala, Sweden Rev 06/2019)

**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**
Rochester

**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 Regional Manager. 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

**LOINC® Information**

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<th>Test Order Name</th>
<th>Order LOINC® Value</th>
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<tr>
<td>FOOD6</td>
<td>Food Panel</td>
<td>30187-9</td>
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<table>
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