

### Peanut Specific IgE Reflex to Components

**Effective Date: October 2, 2018**

Commencing October 2, 2018, Beaumont Laboratory will offer allergen-specific IgE testing to peanut components. (**Ara h 1, 2, 3, 8, and 9**). These tests will be offered for patients who test positive for specific IgE antibodies to total peanut as described below.

#### **Background and Test Clinical Utility:**

A peanut allergy diagnosis is based on a clinical history of symptoms after exposure to peanut (*Arachis hypogaea*), and is supported by a positive specific serum IgE (sIgE) and/or a positive skin prick test (SPT). Both these tests provide evidence of allergen-specific sensitization, which does not necessarily equate to the presence of allergic symptoms after exposure to the sensitizing allergen (clinical allergy). One reason why standard peanut sIgE (i.e. total peanut) and SPT differentiate poorly between asymptomatic sensitization and patients with peanut allergy, is that the antigen source used for these tests is derived from crude natural peanut extracts that contain both allergenic and non-allergenic molecules. Component-based testing assesses specific IgE to individual peanut allergens or components, and has been shown to correlate better to clinical peanut allergy.

#### **Peanut Components:**

##### **Ara h 1, Ara h 2, Ara h 3**

- Seed storage protein components; all are considered major peanut allergens.
- Sensitization may indicate an increased risk of a systemic allergy response upon exposure to peanut.

##### **Ara h 8, Ara h 9**

- Ara h 8 is member of the PR-10 protein family and a Bet v 1-homologue, which is a major birch pollen allergen component. Ara h 9 is a lipid transfer protein also found in pitted fruits.
- Sensitization to Ara h 8 and/or Ara h 9 are associated with milder peanut allergies. A positive test may be due to cross-reactivity in patients sensitized to birch pollen or pitted fruits, respectively.

#### **Testing Algorithm:**

1. Specific IgE, total peanut
2. If negative (< 0.35 kU/L), no further testing is performed (no clinical utility for component-based testing).  
If **positive** (≥ 0.35 kU/L), component-based testing will be performed (Ara h 1, 2, 3, 8, 9).

#### **Ordering Information:**

Epic Test Codes: LAB7146

Specimen Collection Requirement: One gold-top Serum Separator Tube (SST)

*If you have questions, please contact Client Services (1-800-551-0488, option 5).*

For additional information, access the Laboratory Test Directory at:

<http://beaumontlaboratory.com/test-lab-directory>

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**Date submitted:** September 18, 2018

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