# Laboratory Dimensions

sanfordlaboratories.org

## In This Issue

Volume 24, Issue 1 March 2017

Sanford Laboratories Offers Component Allergy Testing

We Honor All Medical Laboratory Professionals

Enhancements to Our Web Site



Laboratories

## SANFORD LABORATORIES OFFERS COMPONENT ALLERGY TESTING

Allergy component testing is a new area which is evolving rapidly. The use of allergen components in testing for specific IgE sensitization may assist in the assessment of the clinical risk for reaction in sensitized patients. Sanford Laboratories is pleased to announce the addition to our already extensive allergen test menu of whole extract: "component based allergens"— Component Allergy testing for peanut, egg, and milk. For peanut, we test for five available components for more detailed assessment; for egg, we test for two components; and for milk, three components.

In addition, Sanford Laboratories will be reporting **all** specific IgE testing allergen testing and Component Allergy testing utilizing the ImmunoCAP Specific IgE Assay to accurately measure and report quantitative results down to **0.10 kU<sub>A</sub>/L**. In general, low IgE antibody levels indicate a low probability of clinical disease, whereas high levels of antibody to an allergen correlate well with clinical disease. However, all test results should be interpreted in the context of the patient's history and symptoms as even very low levels can be clinically relevant, especially with components. Therefore, our full analytical measuring range is  $0.01-100kU_AL$ .

Component testing can help explain symptoms that may be due to cross reactivity, given the potential for a *life threatening reaction* associated with sensitization to certain allergen components.

### Peanut Allergen Component Testing

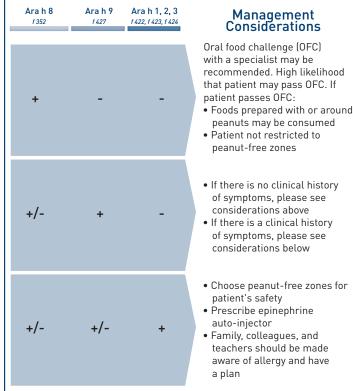
An allergen test that detects sensitization to peanut is only the first step in decoding the patient's allergy. Peanut Component tests can help determine the likelihood of a systemic reaction and the necessary precautions that may be prescribed.

Peanut Allergen Component testing can help determine which proteins the patient is sensitized to. It is strongly recommended to measure all five available components, because any level of sensitization may be clinically important.

CHARACTERISTICS OF INDIVIDUAL PROTEINS						
Peanut f 13	Ara h 8 f 352	Ara h 9 f 427	Ara h 1, 2, 3 f 422, f 423, f 424			
<ul> <li>High levels of peanut IgE can predict the likelihood of peanut sensitivity, but may not be solely predictive of reactions or allergic responses<sup>1</sup></li> </ul>	<ul> <li>LOWER RISK of systemic reaction<sup>2</sup></li> <li>Risk of mild, localized symptoms, such as itching/tingling of the lips, mouth, and oropharynx<sup>3</sup></li> <li>Cross-reactive with pollens (e.g., birch)<sup>3</sup></li> </ul>	<ul> <li>VARIABLE RISK of systemic reaction including anaphylaxis<sup>4</sup></li> <li>Often accompanied by sensitization to other peanut proteins<sup>5</sup></li> <li>Cross-reactive with fruits with pits (e.g., peaches)<sup>4</sup></li> </ul>	<ul> <li>HIGHER RISK of systemic reaction including anaphylaxis<sup>6,7</sup></li> <li>Sensitization to Ara h 2 is nearly always associated with clinical peanut allergy<sup>2</sup></li> </ul>			

### (article continued from page 1)

77.6% of patients sensitized to peanut may not be at risk for a systemic reaction.



As in all diagnostic testing, a diagnosis must be made by the physician based on test results, individual patient history, the physician's knowledge of the patient, and the physician's clinical judgement.

### Egg Component Testing

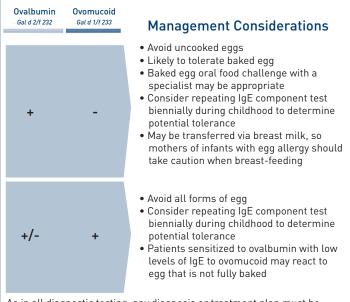
Egg Component testing can help determine which proteins affect your patients. An ImmunoCAP allergen test that detects sensitization to egg is only the first step in decoding your patient's allergy. ImmunoCAP Egg Component testing can help determine the likelihood of a systemic reaction and the necessary precautions that may be prescribed.

With Egg Component test results, the health care provider has more information necessary to evaluate the patient's potential risk of systemic reaction, manage dietary modifications and medication, and improve the patient's quality of life.

CHARACTERISTICS OF INDIVIDUAL PROTEINS					
Egg White	Ovalbumin Gal d 2/f 232	Ovomucoid gal d 1/f 233			
<ul> <li>High levels of egg white IgE may predict the likelihood of sensitivity, but may not be solely predictive of reactions to baked egg or allergy duration<sup>1</sup></li> </ul>	<ul> <li>Susceptible to heat denaturation<sup>2</sup></li> <li>HIGHER RISK of reaction to uncooked egg<sup>1,3</sup></li> <li>LOWER RISK of reaction to baked egg<sup>1,3*</sup></li> <li>Patient likely to "outgrow" egg allergy<sup>4</sup></li> </ul>	<ul> <li>Resistant to heat denaturation<sup>2</sup></li> <li>HIGHER RISK of reaction to all forms of egg<sup>1</sup></li> <li>Patient unlikely to "outgrow" egg allergy with high levels of specific IgE to ovomucoid<sup>5,6,7,8</sup></li> </ul>			
*In clinical studies, extensively baked muffin and waffle were heated to the point of protein denaturation.					

70% of children with egg allergy do not react to **baked egg**.

Knowing which protein your patient is sensitized to can help develop a management plan. A specific IgE blood test that detects sensitization to egg white is the first step in discovering a patient's allergy. Egg Allergen Component tests can help determine the likelihood of reaction to products baked with egg, such as muffins or cookies, as well as the likelihood of allergy persistence.



As in all diagnostic testing, any diagnosis or treatment plan must be made by the physician based on test results, individual patient history, the physician's knowledge of the patient, and the physician's clinical judgement.

### Milk Allergen Component Testing

A specific IgE blood test that detects sensitization to cow's milk is the first step in discovering the patient's allergy. Milk Allergen Component tests can help you determine the likelihood of reaction to baked goods, such as cookies or cheese pizza, as well as the likelihood of allergy persistence.

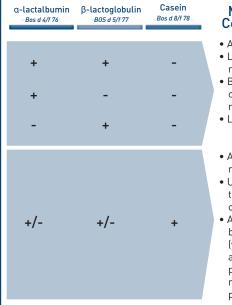
CHARACTERISTICS OF

INDIVIDUAL PROTEINS						
Cow's Milk	α-lactalbumin β Bos d 4/f 76	Bos d 5/f 77	Casein Bos d 8/f 78			
<ul> <li>High levels of cow's milk IgE may predict the likelihood of sensitivity, but may not be solely predictive of reactions to baked milk or allergy duration<sup>1</sup></li> </ul>	<ul> <li>Susceptible to heat denaturation<sup>2</sup></li> <li>HIGHER RISK of reaction to fresh milk<sup>1,3</sup></li> <li>LOWER RISK of reaction to baked milk<sup>1,3*</sup></li> <li>Patient likely to "outgrow" milk allergy<sup>4</sup></li> </ul>	<ul> <li>Susceptible to heat denaturation<sup>2</sup></li> <li>HIGHER RISK of reaction to fresh milk<sup>1,3</sup></li> <li>LOWER RISK of reaction to baked milk<sup>1,3*</sup></li> <li>Patient likely to "outgrow" milk allergy<sup>4</sup></li> </ul>	<ul> <li>Resistant to heat denaturation<sup>3</sup></li> <li>HIGHER RISK of reaction to all forms of milk<sup>1,3,5</sup></li> <li>Patient unlikely to "outgrow" milk allergy with high levels of specific IgE to casein<sup>4</sup></li> </ul>			

\*In clinical studies, extensively baked muffin, waffle, and cheese pizza were heated to the point of protein denaturation.

**75%** of children with cow's milk allergy do not react to **baked milk**.

Milk Component test results, health care providers have more information necessary for proper diagnosis, allowing providers to evaluate the patient's potential risk of systemic reaction, and develop a more comprehensive management plan.



### Management Considerations

- Avoid fresh milk
- Likely to tolerate baked milk products
- Baked milk oral food challenge with a specialist may be appropriate
- Likely to outgrow allergy
- Avoid all forms of cow's milk
- Unlikely to become tolerant of cow's milk over time
- Avoid cow's milk and baked milk products (yogurt, cookies, cakes), as well as products processed with milk (chocolate, sausage, potato chips)

As in all diagnostic testing, a diagnosis must be made by the physician based on test results, individual patient history, the physician's knowledge of the patient, and the physician's clinical judgement.

### **Ordering Information:**

Test Code: BLOD1515

Test: Peanut Allergen Reflex to Components

CPT Code: 86003

**Specimen Requirements:** 1.2 mL serum. Refrigerate. Stability: REFT – 7 days Frozen >7 days

### Test Code: BLOD1516

Test: Peanut Allergen Component Panel

**CPT Code:** 86003

Specimen Requirements: 1.0 mL serum. Refrigerate.

Stability: REFT – 7 days Frozen >7 days

Test Code: BLOD1519

Test: Egg White Allergen Reflex to Components

**CPT Code:** 86003

**Specimen Requirements:** 0.6 mL serum. Refrigerate. Stability: REFT – 7 days

Frozen >7 days

Test Code: BLOD1520

Test: Egg White Allergen Components Panel

**CPT Code:** 86003

Specimen Requirements: 0.4 mL serum. Refrigerate.

Stability: REFT – 7 days Frozen >7 days

Test Code: BLOD1517

**Test:** Milk Allergen Reflex to Components **CPT Code:** 86003

Specimen Requirements: 0.8 mL serum. Refrigerate.

Stability: REFT – 7 days

Frozen >7 days

Test Code: BLOD1518 Test: Milk Allergen Component Panel CPT Code: 86003 Specimen Requirements: 0.6 mL serum Refrigerate. Stability: REFT – 7 days Frozen >7 days.

References: ImmunoCAP Handouts from Thermo Fisher Scientific

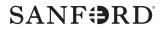
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APRIL 23-29, 2017



## Laboratory Professionals GET RESULTS

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### **ENHANCEMENTS TO OUR WEB SITE**

Sanford Laboratories is pleased to announce a "*new look*" to our Web site which includes a new *Test Menu* format.

Along with an updated look, the enhancements offer you the following features:

> An expanded number of tests available on the Web site *Test Menu* 

> *Test Menu Search* with intuitive prompting to help find specific test information more quickly

A more user-friendly sidebar menu to access information you are seeking under *General Information*, i.e. *General Specimen Labeling Policy*, etc.



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