

# Setting the standard

## ImmunoCAP™ Specific IgE Egg Allergen Components\*

Use this guide to interpret ImmunoCAP Allergen Component test results and unlock a broader understanding of a patient's allergic sensitization, allowing for a more comprehensive management plan.<sup>1</sup>

### Testing with egg allergen components can help to:<sup>1-6</sup>



Assess risk for clinical reactions to egg



Evaluate potential tolerance to baked egg products



Address parental anxiety

75%

Up to 75% of children with egg allergy can tolerate baked egg<sup>2-4</sup>

Egg white contains the most allergenic proteins in hens egg. Testing for specific IgE to egg allergen components can help understand the likelihood of outgrowing an egg allergy and possibility of tolerating baked egg products.<sup>2</sup>



## Characteristics of individual proteins<sup>2,5</sup>

### Ovomucoid Gal d 1

- Resistant to heat denaturation
- Marker of persistent egg allergy
- Highly allergenic

### Ovalbumin Gal d 2

- Susceptible to heat denaturation
- Most abundant egg white protein
- Risk for clinical reaction to raw and lightly cooked egg

## Management considerations<sup>5,6</sup>

Egg white Whole allergen	Ovalbumin Gal d 2	Ovomucoid Gal d 1	
+	+/-	+	<p><b>If clinical symptoms are present</b> with exposure to egg, consider the following:</p> <ul style="list-style-type: none"> <li>Avoiding all forms of egg</li> <li>Patients sensitized to ovalbumin with low levels of IgE to ovomucoid may react to egg that is not fully baked</li> <li>Less likely to outgrow/develop tolerance to egg</li> </ul>
+	+	-	<p><b>If clinical symptoms are present</b> with exposure to egg, consider the following:</p> <ul style="list-style-type: none"> <li>Avoiding uncooked/lightly cooked eggs and non-baked egg products (e.g. scrambled eggs)</li> <li>Baked egg oral food challenge (OFC) with a specialist may be appropriate</li> <li>More likely to outgrow/develop tolerance to egg</li> </ul>

Note: As in all diagnostic testing, any diagnosis or treatment plan must be made by the clinician based on test results, individual patient history, the clinician's knowledge of the patient, as well as their clinical judgment. Patients can be sensitized to more than one allergen component.<sup>1</sup>

**Whole allergens consist of numerous allergen components.** A positive whole allergen sensitization with negative allergen component sensitization may mean a patient is sensitized to a component that is not yet available for testing. Consider a patient's clinical history and if an OFC with a specialist may be warranted.

\* Official product names of allergen components mentioned within this document: ImmunoCAP Allergen f1, Egg White; ImmunoCAP Allergen f232, Allergen component nGal d 2 Ovalbumin, Egg; ImmunoCAP Allergen f233, Allergen component nGal d1 Ovomuroid, Egg

<sup>†</sup> Recommended method of heating is baked in the oven at 350°F for 30 min.<sup>6</sup>

### References

1. Kleine-Tebbe J, Jappe U. Molecular allergy diagnostic tests: development and relevance in clinical practice. *Allergologie select.* 2017;1 (2):169-1893. 2. Lemon-Mulé H, Sampson HA, Sicherer SH, Shreffler WG, Noone S, Nowak-Węgrzyn A. Immunologic changes in children with egg allergy ingesting extensively heated egg. *J Allergy Clin Immunol.* 2008;122(5):977-983. 3. De Boer R, Cartledge N, Lazenby S, Tobias A, Chan S, Fox AT, Santos AF. Specific IGE as the best predictor of the outcome of challenges to baked milk and baked egg. *The Journal of Allergy and Clinical Immunology: In Practice.* 2020;8(4). 4. Leonard SA. Baked milk- and egg-containing diet in the management of milk and Egg Allergy. *The Journal of Allergy and Clinical Immunology: In Practice.* 2015;3(1):24. 5. Molecular Allergy User's Guide 2.0 - EAACI Knowledge Hub [Internet]. EAACI Knowledge Hub. 2022 [cited 2022 Jul 14]. Available from: [https://hub.eaaci.org/resources\\_guidelines/molecular-allergy-users-guide-2-0/](https://hub.eaaci.org/resources_guidelines/molecular-allergy-users-guide-2-0/) :295-. 6. Ando H, Movérare R, Kondo Y, et al. Utility of ovomucoid-specific IgE concentrations in predicting symptomatic egg allergy. *J Allergy Clin Immunol.* 2008;122(3):583-588.

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