

Setting the standard

ImmunoCAP™ Specific IgE Milk 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.¹

Testing with milk allergen components can help to:¹⁻⁷



Assess risk for clinical reactions to milk



Evaluate potential tolerance to baked milk products



Address parental anxiety

83%

Up to 83% of children with milk allergy can tolerate baked milk²⁻⁴

Cow's milk allergen component testing can help understand the likelihood of outgrowing a milk allergy and possibility of not reacting to baked milk products.^{2,5}



Characteristics of individual proteins

Casein Bos d 8

- Resistant to heat denaturation²
- Marker of persistent milk allergy²
- Heat and digestion stable²
- Highly allergenic⁷

α -lactalbumin Bos d 4, β -lactoglobulin Bos d 5

- Proteins denature once extensively heated^{6†}
- Abundant proteins in whey²
- Risk for clinical reaction to raw or lightly cooked cow's milk²

Management considerations^{2,5}

α -lactalbumin Bos d 4	β -lactoglobulin Bos d 5	Casein Bos d 8	
+/-	+/-	+	<p>If clinical symptoms are present with exposure to cow's milk, consider the following:</p> <ul style="list-style-type: none"> • Avoiding all forms of cow's milk and milk protein (e.g. sour cream and yogurt) • Patients sensitized to α-lactalbumin and/or β-lactoglobulin with low levels of IgE to casein may react to milk that is not fully baked • Less likely to outgrow/develop tolerance to cow's milk
+/-	+/-	-	<p>If clinical symptoms are present with exposure to milk, consider the following:</p> <ul style="list-style-type: none"> • Avoiding fresh cow's milk and non-baked cow's milk products • Baked cow's milk oral food challenge (OFC) with a specialist may be appropriate • More likely to outgrow/develop tolerance to cow's milk

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.¹

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 f2, Milk; ImmunoCAP Allergen f76, Allergen component nBos d 4 Alpha-lactalbumin, Milk; ImmunoCAP Allergen f77, Allergen component nBos d 5 Beta-lactoglobulin, Milk; ImmunoCAP Allergen f78, Allergen component nBos d 8 Casein, Milk

[†] Recommended method of heating is baked in the oven at 350°F for 30 min.^{4,6}

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.** 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/:287-290. **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.** Sicherer SH, Sampson HA. Cow's milk protein-specific IgE concentrations in two age groups of milk-allergic children and in children achieving clinical tolerance. *Clin Exp Allergy*. 1999;29(4):507-512. **6.** Bu G, Luo Y, Chen F et al. Milk processing as a tool to reduce cow's milk allergenicity: a mini review. *Dairy Sci. & Technol*. 2013; 93:211-223. **7.** Shek LP, Bardina L, Castro R, Sampson HA, Beyer K. Humoral and cellular responses to cow milk proteins in patients with milk-induced IgE-mediated and non-IgE-mediated disorders. *Allergy*. 2005;60(7):912-919.

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