

CASHEW NUT

Molecular Allergology



Make a precise assessment

ImmunoCAP Allergen Components help you differentiate between primary allergies and cross-reactivity

Make a substantiated decision

A better differentiation helps you give relevant advice and define the optimal treatment

Make a difference

More informed management helps you improve the patient's well-being and quality of life

References: 1. Sicherer S. *Current reviews of allergy and clinical immunology*. J Allergy Clin Immunol. 2001; 108(6): 881 – 890. 2. Robotham J et al. *Ana o 3, an important cashew nut (Anacardium occidentale L.) allergen of the 2S albumin family*. J Allergy Clin Immunol. 2005; 115(6): 1284 – 90. 3. <http://www.allergen.org>. Allergen nomenclature, approved by the World Health Organization and International Union of Immunological Species (WHO/IUIS) Allergen Nomenclature Subcommittee. 4. Roux K et al. *Tree nut allergens*. Int Arch Allergy Immunology 2003; 131: 234 – 244. 5. Sastre J. *Molecular diagnosis in allergy*. Clinical and exp. allergy 2010; 40: 1442 – 1460. 6. Masthoff L et al. *Sensitization to Cor a 9 and Cor a 14 is highly specific for a severe hazelnut allergy in Dutch children and adults*. J Allergy Clin Immunol. 2013 (*In press*). 7. Pastorello E. et al. *Sensitization to the major allergen of Brazil nut is correlated with the clinical expression of allergy*. J Allergy Clin Immunol. 1998; 102(6): 1021 – 1027. 8. Maloney J et al. *The use of serum-specific IgE measurements for the diagnosis of peanut, tree nut and seed allergy*. J Allergy Clin Immunol. 2008; 122(1): 145 – 151. 9. Hasegawa M et al. *Clinical features of four cases with cashew nut allergy and cross-reactivity between cashew nut and pistachio*. Allergol Int. 2011 Dec; 60(4): 425 – 32. 10. Clark A et al. *Cashew nut causes more severe reactions than peanut: case-matched comparison in 141 children*. Allergy 2007; 62(8): 913 – 6. 11. de Silva I et al. *Allergy. Paediatric anaphylaxis: a 5 year retrospective review*. Allergy 2008 Aug; 63(8): 1071 – 6. 12. Davoren M et al. *Cashew nut allergy is associated with a high risk of anaphylaxis*. Arch Dis Child 2005; 90(10): 1084 – 5. 13. Vetander M et al. *Anaphylaxis and reactions to foods in children-a population-based case study of emergency department visits*. Clin Exp Allergy 2012 Apr; 42(4): 568 – 77. 14. Noorbakhsh R et al. *Pistachio allergy – prevalence and in vitro cross-reactivity with other nuts*. Allergol Int. 2011 Dec; 60(4): 425 – 32. 15. Wang F et al. *Ana o 2, a major cashew (Anacardium occidentale L.) nut allergen of the legumin family*. Int Arch Allergy Immunol. 2003 Sep; 132(1): 27 – 39.

Improved risk assessment

in cashew nut allergy

– use components for better management of cashew nut allergic patients

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Take the diagnosis and management of cashew nut allergic patients to a whole new level

Identify primary cashew nut sensitization

Diagnosing nut allergy and identifying the trigger allergen(s) is sometimes difficult.¹ Molecular allergy diagnostics can help to identify primary cashew nut (*Anacardium occidentale*) sensitization in nut allergic patients.

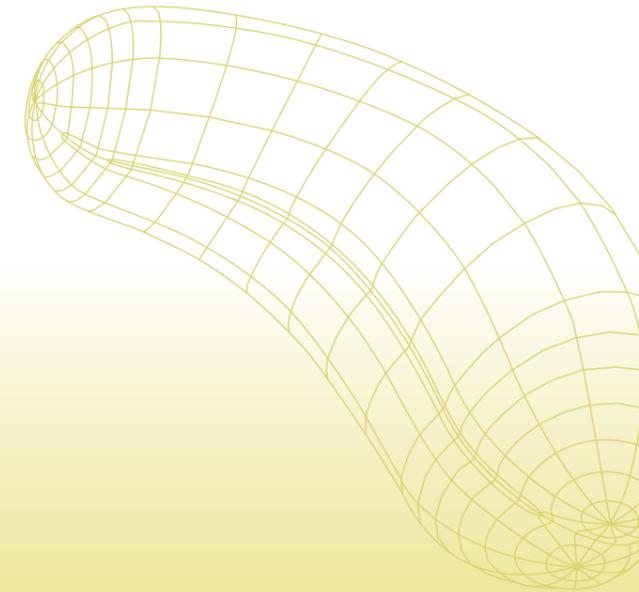
- Ana o 3 is a storage protein (2S albumin) and a major cashew nut allergen.^{2,3}
- Sensitization to Ana o 3 indicates a primary cashew nut allergy.²

Improve the risk assessment using allergen components

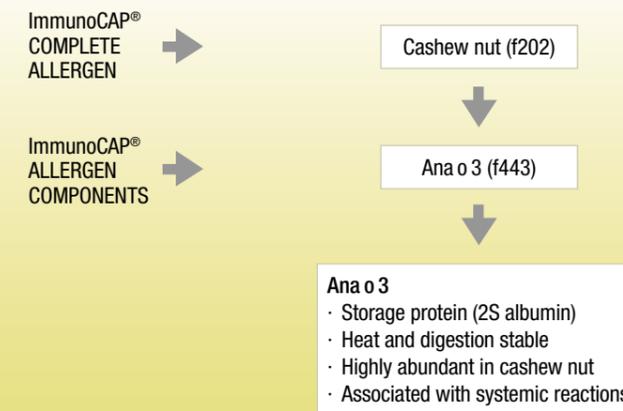
- Sensitization to 2S albumins, such as Ana o 3, is known to be associated with systemic food reactions.^{2,4-7}

Improve management of cashew nut allergic patients

- Cashew nut allergic patients sensitized to Ana o 3 should avoid raw as well as roasted/heated cashew nuts.^{4,6}
- Cashew nut allergic patients with sensitization to Ana o 3 should also be investigated for allergy to other nuts or seeds, such as pistachio, walnut and peanut, as co-existing allergies may occur.^{1,2,8,9}



Suggested test profile



A positive f202 with negative Ana o 3 results may be explained by sensitization to:

- Other cashew nut storage proteins or lipid transfer protein (LTP)
- Cross-reactivity with profilin in pollen. Due to high degree of similarity markers like Bet v 2 or Phl p 12 (profilins) may be used
- CCD (cross-reacting carbohydrate determinants)



Did you know that?

- Cashew nut allergic patients have high risk of experiencing severe allergic reactions; the risk has been reported to be even higher than for peanut allergic patients (74 % vs. 30 %).^{2,10-13}
- Cashew nut and pistachio are botanically closely related and show extensive cross-reactivity.^{2,4,9,14}
- Cashew nut allergy is potentially life-threatening, can start early in life and is rarely outgrown.^{1,12,15}
- Symptoms can be elicited upon first known exposure and the dose is often very low (e.g. smelling, touching without eating).^{10,12,15}
- Cashew nut allergy is increasing in parallel with increased consumption as it's becoming a popular snack, a common ingredient of oriental and processed foods such as nut "butters", bakery and pesto.^{2,10}