



# CASHEW NUT

Molecular Allergology



## Improved risk assessment in cashew nut allergy

– use components for better management of cashew nut allergic patients

# 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.<sup>1</sup> 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.<sup>2,3</sup>
- Sensitization to Ana o 3 indicates a primary cashew nut allergy.<sup>2</sup>

## Improve the risk assessment using allergen components

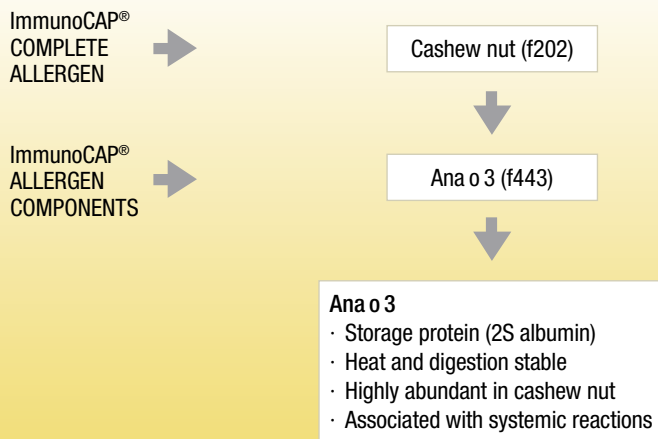
- Sensitization to 2S albumins, such as Ana o 3, is known to be associated with systemic food reactions.<sup>2,4-7</sup>

## 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.<sup>4,6</sup>
- 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.<sup>1,2,8,9</sup>



## Suggested test profile

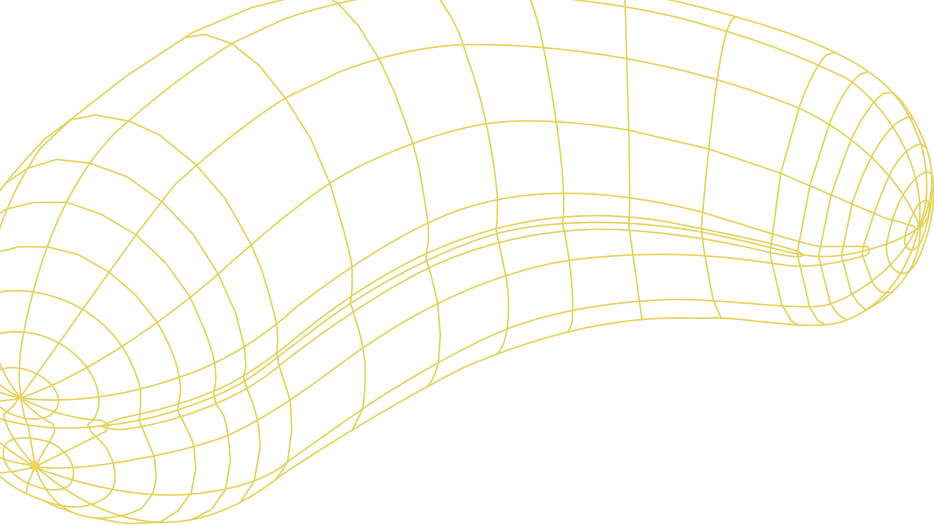


**A positive f202 with negative Ana o 3 results may be explained by sensitization to:**

- 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 %).<sup>2,10-13</sup>
- Cashew nut and pistachio are botanically closely related and show extensive cross-reactivity.<sup>2,4,9,14</sup>
- Cashew nut allergy is potentially life-threatening, can start early in life and is rarely outgrown.<sup>1,12,15</sup>
- Symptoms can be elicited upon first known exposure and the dose is often very low (e.g. smelling, touching without eating).<sup>10,12,15</sup>
- 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.<sup>2,10</sup>



## 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.

[thermoscientific.com/phadia](http://thermoscientific.com/phadia)

© 2014 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Manufacturer; Phadia AB, Uppsala Sweden.

**Head office Sweden** +46 18 16 50 00  
**Austria** +43 1 270 20 20  
**Belgium** +32 2 749 55 15  
**Brazil** + 55 11 3345 5050  
**China** +86 800 810 5118  
**Czech Republic** +420 220 518 743  
**Denmark** +45 70 23 33 06  
**Finland** +358 9 3291 0110  
**France** +33 1 61 37 34 30

**Germany** +49 761 47 8050  
**Hong Kong** +852 2885 4613  
**India** +91 11 4610 7555/56  
**Italy** +39 02 64 163 411  
**Japan** +81 3 5826 1660  
**Korea** +82 2 2027 5400  
**Norway** +47 21 67 32 80  
**Portugal** +351 21 423 5350  
**South Africa** +27 11 792 6790

**Spain** +34 935 765 800  
**Sweden** +46 18 16 60 60  
**Switzerland** +41 43 343 40 50  
**Taiwan** +886 2 8751 6655  
**The Netherlands** +31 30 602 37 00  
**United Kingdom/Ireland** +44 1 908 769 110  
**USA** +1 800 346 4364  
**Other countries** +46 18 16 50 00

52-5109-32/02 929-2402 1411 heart.se

**Thermo**  
SCIENTIFIC

A Thermo Fisher Scientific Brand

Distributed by Abacus dx

1800 ABACUS (AUS) 0800 222 170 (NZ) | [info@abacusdx.com](mailto:info@abacusdx.com) | [www.abacusdx.com](http://www.abacusdx.com)

abacus dx