



Bee and/or
wasp venom
allergy

Indications
for VIT



VENOM ALLERGY

 **ImmunoCAP**[®]
ALLERGEN COMPONENTS



Bee and/or wasp venom allergy and indications for VIT

Discover the connection

ImmunoCAP venom components

Not approved for use in the United States

Thermo
SCIENTIFIC

Matching VIT to the patient's sensitization profile

- Successful venom immunotherapy (VIT) is more likely when treatment selection is based on genuine sensitization to bee and/or wasp venom¹

“As a paradigm, allergen immunotherapy is ‘specific’, meaning that it only modifies the immune response against the allergen for which the vaccination is being performed.”

WAO – ARIA – GA²LEN Consensus Paper on Molecular-based Allergy Diagnostics²

Double positivity – is it a genuine bee and/or wasp venom allergy?

- Positive results with venom extracts do not always reflect genuine sensitization³
- ▼
- In many cases IgE antibodies to CCDs* cause double positivity, but rarely have clinical relevance^{1,3,4}



Up to **50%** of venom allergic patients have positive test results to both bee and wasp venom extracts³

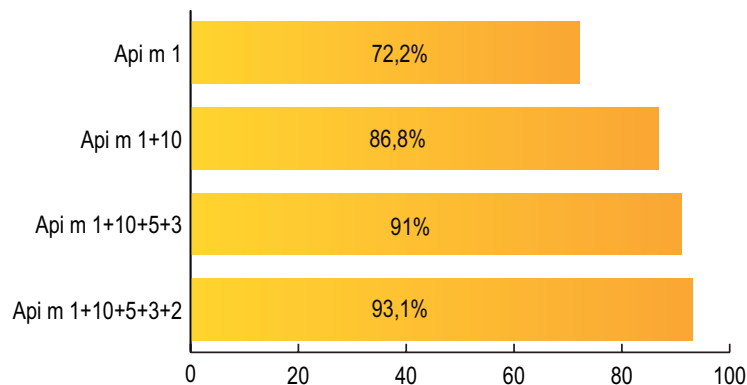
*Cross-reactive Carbohydrate Determinants

Discover the new ImmunoCAP bee venom components

- Api m 10 can be absent or underrepresented in VIT extracts⁵ – VIT of patients sensitized to this component may be less efficient
- Adding venom components rApi m 2 and rApi m 5 to your test panel improves diagnostic specificity and supports more well-founded decisions for VIT^{6,7}

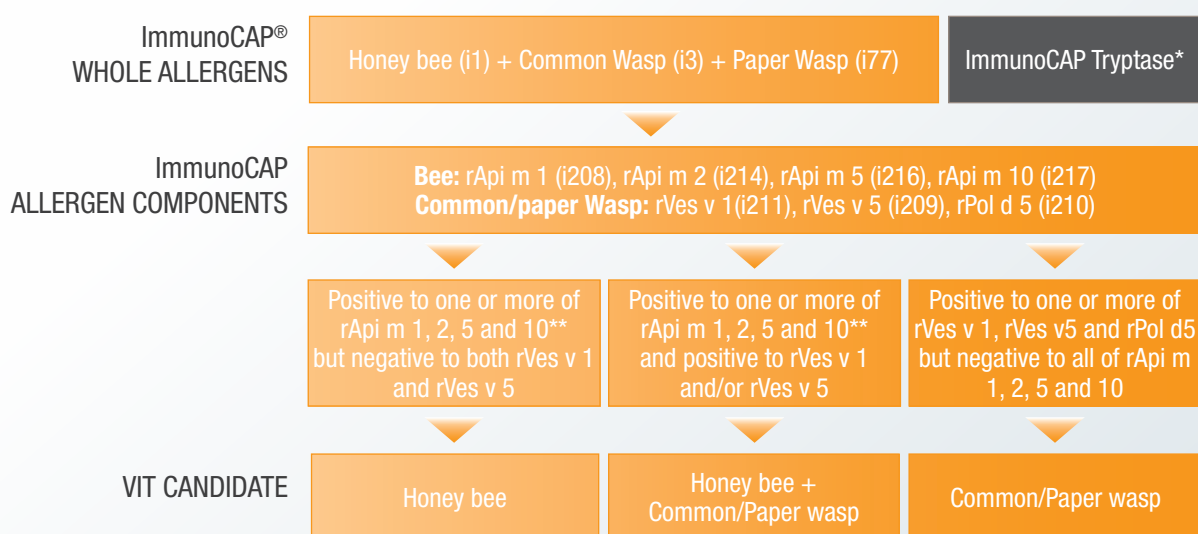
ImmunoCAP bee venom components help improve diagnosis

- Adding components to your test menu can help resolve double positivity and match VIT to the individual patient⁶



Percentage of patients with HBV sensitization detected by different combinations of HBV allergens (n=144). Adapted from Köhler et al.⁶

Identify suitable VIT – suggested test algorithm



“Tryptase should be measured in patients before starting venom SIT.”

EAACI, AAAI, WAO, ICON^{1,4,8-10}

*Measure tryptase baseline levels before VIT to assess risk for severe reactions¹¹

**Api m 10 can be underrepresented in VIT extracts⁵

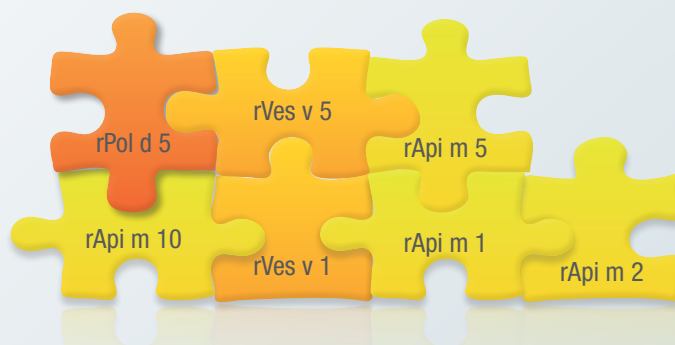
ImmunoCAP Allergen Components help you resolve double positivity

With seven CCD-free venom components you can

Distinguish between true co-sensitization to bee and wasp, and CCD-dependent cross reactivity^{1,4,12,13}

- **Honey bee:** rApi m 1, rApi m 2, rApi m 5 and rApi m 10
- **Common/paper wasp:** rVes v 1, rVes v 5, rPol d 5

Help match venom immunotherapy to the patient's sensitization profile^{1,5,6}



“Detection of recombinant venom allergens can discriminate between genuine venom sensitization and cross reactivity due to CCDs in patients with double-positive IgE results from traditional venom tests that are based on allergen extract”

WAO – ARIA – GA²LEN Consensus Paper on Molecular-based Allergy Diagnostics²

A broad toolbox of ImmunoCAP Allergen Components

Over 100 allergen components that can help you:

- Assess risk of systemic reactions in patients with food allergy²
- Explain symptoms due to cross-reactivity²
- Identify the appropriate immunotherapy for the individual patient²

References: 1. Bonifazi F. et al & EAACI Interest Group on Insect Venom Hypersensitivity, Prevention and treatment of hymenoptera venom allergy: guidelines for clinical practice. *Allergy* 2005; 60: 1459-1470. 2. Canonica G.W. et al., A WAO - ARIA - GA²LEN consensus document on molecular-based allergy diagnostics. *World Allergy Organ J.* 2013; 6(1): 17. 3. Spillner E. et al., Hymenoptera allergens: from venom to "venome". *Frontiers in immunology* 2014; 5: 1-7. 4. Biló B. et al & EAACI Interest Group on Insect Venom Hypersensitivity., Diagnosis of Hymenoptera venom allergy. *Allergy* 2005; 60: 1339-49. 5. Blank S. et al., Api m 10, a genuine *A. mellifera* venom allergen, is clinically relevant but underrepresented in therapeutic extracts. *Allergy* 2011; 66: 1322-29. 6. Köhler J et al., Component resolution reveals additional major allergens in patients with honey bee venom allergy. *J Allergy Clin Immunol* 2014; 133: 1383-89. 7. Frick M. et al., rApi m 3 and rApi m 10 improve detection of honey bee sensitization in Hymenoptera venom –allergic patients with double sensitization to honey bee and yellow jacket venom. *Allergy* 2015; 70: 1665-68. 8. Simons FE. et al., International concensus on (ICON) anaphylaxis. *World Allergy Organ J.* 2014 May 30;7(1):9. 9. Simons FE. et al., World Allergy Organization Anaphylaxis Guidelines:2013 update of the evidence base. *Int Arch Allergy Immunol.* 2013;162(3):193-204. 10. Cox L. et al., Allergen Immunotherapy: A practice parameter third update. *J Allergy Clin Immunol* 2011;127(1):1-55. 11. Rueff F. et al., Predictors of severe systemic anaphylactic reactions in patients with Hymenoptera venom allergy: Importance of baseline serum tryptase - a study of the EAACI Interest Group on Insect Venom Hypersensitivity. *J Allergy Clin Immunol* 2009; 124: 1047-54. 12. Müller U. et al., Hymenoptera venom allergy: analysis of double positivity to honey bee and *Vespula* venom by estimation of IgE antibodies to species-specific major allergens Api m 1 and Ves v 5. *Allergy* 2009; 64: 543-48. 13. Mittermann I. et al., Recombinant allergen-based IgE testing to distinguish bee and wasp allergy. *J Allergy Clin Immunol* 2010; 125: 1300-07.

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