

House dust mite allergy

ImmunoCAP™ Specific IgE tests

House dust mite sensitisation is an important risk factor for rhinitis and asthma.¹ In Europe the most common house dust mites (HDM) are *Dermatophagoides pteronyssinus* and *Dermatophagoides farinae*.¹ **Component-resolved diagnostics can be helpful to improve patient management and support the definition of most appropriate allergen specific immunotherapy (AIT).¹**

ImmunoCAP™
Whole Allergens

Dermatophagoides pteronyssinus (d1) + *Dermatophagoides farinae* (d2)

ImmunoCAP™
Allergen Components[#]

Der p 1 (d202) / Der p 2 (d203) / Der p 23 (d209)

Der p 10 (d205)



Primary sensitiser

Monosensitization can be detected in 3-5% of HDM allergic patients.¹

Choice of AIT

- Differentiation between Der p 1, 2 and 23 sensitisation helps choose appropriate AIT.¹⁻⁵
- Der p 23 amount in fecal particles/bodies is low and this allergen may therefore be underrepresented in AIT.⁶

Assess risk for asthma

- Early sensitisation to Der p 1, Der p 2 and Der p 23 is associated with asthma development.⁷
- Asthmatic patients are sensitised to more components than those without asthma.⁸










Cross-reactive allergen

Further examination needed

- Tropomyosin, minor allergen, less than 10% sensitisation rate in HDM allergy^{1,9}
- Cross-reactivity between HDM, crustaceans, insects and molluscs^{1,9}

[#] High cross-reactivity between *D. pteronyssinus* and *D. farinae* allergen components¹

Management considerations

<i>D. pteronyssinus</i> or <i>D. farinae</i>	Der p 1 / Der p 2 / Der p 23	Der p 10	Considerations
			If clinical symptoms are present with exposure to HDM , high probability of clinical house dust mite allergy. Consider the following: ¹ <ul style="list-style-type: none"> • HDM exposure reduction • Prescription of AIT and appropriate referrals
			Further examination needed: ^{1,9} <ul style="list-style-type: none"> • Possible cross-reactivity • If Der p 10 is dominant, food allergy (e.g., shellfish) should be investigated, history depending
			If all components of the algorithm are negative and d1/d2 are positive, the patient could be sensitised to an untested allergen. As such, in the context of clinical history, exposure reduction may still be recommended. ¹

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

References: **1.** Dramburg S, et al. *Pediatr Allergy Immunol* 2023;34(Suppl 28):e13854. **2.** Asero R. *Eur Ann Allergy Clin Immunol.* 2012;44(5):183-7. **3.** Schmid-Grendelmeier P. *Hautarzt.* 2010;61(11):946-53. **4.** Thomas WR. *Allergology International.* 2015;64:304-11. **5.** Canonica GW, et al. *Expert Rev Clin Immunol.* 2016;12(8):805-15. **6.** Weghofer M, et al. *J Immunol.* 2013;190(7):3059-67. **7.** Posa D, et al. *J Allergy Clin Immunol.* 2017;139:541-94. **8.** Resch Y, et al. *J Allergy Clin Immunol.* 2015;136:1083-91. **9.** Huang H-J, et al. *Molecular Immunol.* 2023;158:54-67. **Official product names:** ImmunoCAP Allergen d1, House dust mite; ImmunoCAP Allergen d2, House dust mite; ImmunoCAP Allergen d202, Allergen component rDer p 1, House dust mite; ImmunoCAP Allergen d203, Allergen component rDer p 2, House dust mite; ImmunoCAP Allergen d209, Allergen component rDer p 23, House dust mite; ImmunoCAP Allergen d205, Allergen component rDer p 10 Tropomyosin, House dust mite

Whole allergen extracts can contain several allergen components.

A positive whole allergen result in combination with negative allergen component results can have several reasons. For example, the patient can be sensitised against a component not yet available for testing. Consider the patient's history, cross-reactivity, and referral to a specialist.¹

 Learn more at thermofisher.com/allergencomponents