Clinical Utility

ImmunoCAP® Allergen component Der p 1 and ImmunoCAP® Allergen component Der p 2 are important diagnostic tools. Der p 1 and Der p 2 can be used for selecting patients for specific immunotherapy (SIT) (1). Specific IgE antibodies to Der p 1 and Der p 2 indicates that the patient is a suitable candidate for SIT to house dust mite.

Der p 1 and Der p 2 are important diagnostic tools, complementing the extract based ImmunoCAP® Allergen d1 and ImmunoCAP® Allergen d2, in providing a more detailed sensitization profile of mite allergic patients.

Allergen Description

House dust mites represent one of the most important allergen sources worldwide (2, 3). The most important house dust mites are Dermatophagoides pteronyssinus and, in drier areas Dermatophagoides farinae. In subtropical and tropical regions the storage mite Blomia tropicalis is also a major source of allergens, co-existing with D. pteronyssinus.

Der p 1 and Der p 2 are major allergens in D. pteronyssinus. Der p 1 belongs to the group 1 mite allergens and is a protein of 25 kDa. Der p 2, is a heat- and pH stable protein of 14 kDa, belonging to the group 2 mite allergen. So far 23 house dust mite allergens has been described and it seems that the IgE binding frequency of individual allergens may show high variability in certain populations (1, 4).

Cross-Reactivity

Der p 1 and Der f 1 have 80 % homologous amino acid sequence and they can induce cross-reacting antibodies in sera from house dust mite allergic patients (5, 6). Der p 1 is reported to show moderate or low cross-reactivity to group 1 allergens from other mites (7, 8, 9). The group 2 allergens from D. pteronyssinus and D. farinae, Der p 2 and Der f 2 have been reported to have almost complete cross reactivity (10).

Clinical Experience

More than 50 % of allergic patients and up to 80 % of asthmatic children are sensitized to mite allergens (11, 12). Results from a recent European study demonstrates that the two major allergens Der p 1 and Der p 2 appear to be sufficient for the diagnosis of more than 97 % of D. pteronyssinus allergic patients (4). In the same study significant differences regarding IgE reactivity were observed for some allergens. For example patients from Sweden reacted less to Der p 2 compared to patients from Austria, France and Italy (4).
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For further reading, see: www.immunocapinvitrosight.com