

Abstract :

Der p 5 is one of the important house dust mite allergens in Algeria; this allergen is frequently recognized by patients with allergic asthma. However, there is no information on its IgG-binding epitopes. In the present study, rabbits were immunized with recombinant Der p 5 allergen, and serum samples were obtained. Recognition of linear IgG epitopes of Der p 5 was determined using synthesized peptides derived from the allergen sequence. The results showed that serum from immunized rabbits recognized three linear epitopes from Der p 5 (²⁸EDKKHDYQNEFDLLMERIHEQIK⁴³), (³⁷IHEQIKKGELALFYLQEQ⁵⁵) and (⁹²LMQRKDLDFEQYNLEMAKKS¹¹²). More interestingly, we observed that the ⁹²L-S¹¹² amino acid sequence is well recognized by both IgE and IgG antibodies. Der p 5 stimulates the synthesis of specific IgG antibodies which recognize common but also novel epitopes compared to IgE antibody binding. Indeed, the potential to induce IgG antibodies can be used to inhibit human IgE binding to allergens which may be part of the mechanism of action of specific immunotherapy.