

Birch pollinosis

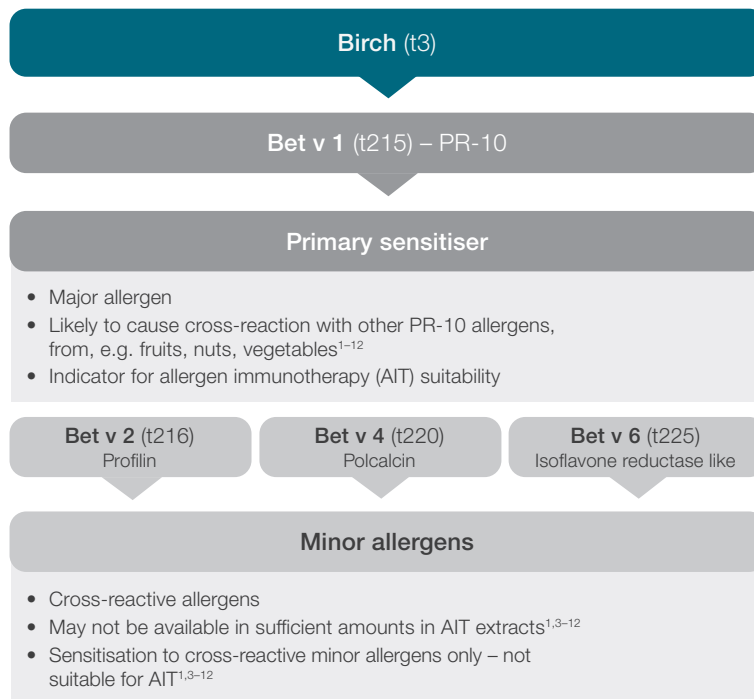
ImmunoCAP™ Specific IgE tests

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Birch, belonging to *Betulaceae* family, is one of the most common tree species producing pollen allergens in Europe.¹ Birch pollen is one of the main causes of asthma, allergic rhinoconjunctivitis and allergic rhinitis symptoms and the sensitisation to birch pollen has been found to be prevalent in the range from 8 to 16% in European countries.²

ImmunoCAP™
Whole Allergen

ImmunoCAP™
Allergen Components



Allergen immunotherapy











The success of AIT depends heavily on whether a patient is sensitised against major allergens like Bet v 1.¹⁻¹²



Pollen food allergy syndrome

Proteins structurally related to PR-10, such as the major birch allergen (Bet v 1), are found in tree pollen of the order Fagales, fruits, nuts and vegetables. Sensitisation to major tree pollen allergens can lead to allergic symptoms of the lips and mouth (swelling, redness, tingling) when eating raw fruits, nuts, and vegetables.¹³



Whole extract Birch	Primary sensitiser Bet v 1	Cross-reactive allergens Bet v 2# / Bet v 4# / Bet v 6	Interpreting results*	Management considerations	
			<ul style="list-style-type: none"> Primary birch sensitisation is likely Likely cross-reaction with other PR-10 allergens from, e.g. fruits, nuts, vegetables¹⁻¹² 	<ul style="list-style-type: none"> Consider prescription of AIT Birch pollen exposure reduction Consider targeted antihistamines around birch season Consider assessing risk of reaction to fruits, nuts and vegetables¹⁻¹² 	
			<ul style="list-style-type: none"> Sensitisation to cross-reactive minor allergens^{1,3-12} The primary allergen source should be identified¹ 	<ul style="list-style-type: none"> Not suitable for AIT Consider further investigations to identify the primary allergen Consider targeted antihistamines around birch season^{1,3-12} 	
			If all components of the algorithm are negative and t3 is positive, the patient could be sensitised to an untested allergen. As such, in the context of clinical history, exposure reduction may still be recommended. ⁴		

* Results should always be interpreted in the context of the clinical history. # Profilin (Bet v 2, Phl p 12) and polcalcin (Bet v 4, Phl p 7) from birch and Timothy grass can be used as marker for almost all pollen due to structural similarity.¹⁸

References: 1. Draburg S, et al. *Pediatr Allergy Immunol* 2023;34(Suppl 28):e13854. 2. Biedermann T, et al. *Allergy* 2019;74(7):1237-1248. 3. Hatzler L, et al. *J Allergy Clin Immunol* 2012;130(4):894-901 e5. 4. Barber D, et al. *Allergy* 2008;63(11):1550-1558. 5. Sekerkova A, et al. *Allergol Int* 2012;61(2):339-346. 6. Tripodi S, et al. *J Allergy Clin Immunol* 2012;129(3): 834-839 e8. 7. Cipriani F, et al. *Allergy* 2017. 8. Hauser M, et al. *Allergy Asthma Clin Immunol* 2010;6(1):1. 9. Schmid-Grendelmeier P. *Der Hautarzt* 2010;61(11):946-953. 10. Focke M, et al. *Clin Exp Allergy* 2008;38(8):1400-1408. 11. Walker SM, et al. *Clin Exp Allergy* 2011;41(9): 1177- 1200. 12. Valenta R, et al. *J Investig Allergol Clin Immunol* 2007;17(Suppl 1):36-40. 13. Manzanares, et al. *Front Allergy* 2023. 14. Akdis CA, Agache I. (Eds.) *Global atlas of allergy* 2014.

Official product names: ImmunoCAP Allergen t3, Common silver birch; ImmunoCAP Allergen t215, Allergen component rBet v 1 PR-10, Birch; ImmunoCAP Allergen t216, Allergen component rBet v 2 Profilin, Birch; ImmunoCAP Allergen t220, Allergen component rBet v 4, Birch; ImmunoCAP Allergen t225, Allergen component rBet v 6, Birch

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