OLIVE POLLEN

Molecular Allergology

ImmunoCAP®
ALLERGEN COMPONENTS

Use components to identify patients for

appropriate olive pollen SIT

Resolve multiple positivity to pollen tests

Thermo
SCIENTIFIC

Use components to resolve
multiple positivity to pollen tests

Most olive pollen allergic patients are poly-sensitized to several tree, weed or grass pollen allergens and the case history does not always clearly suggest which pollens are causing the symptoms.[1,4,9] Moreover, a positive olive pollen extract test may be a result of cross-reactivity and not by genuine olive pollen extract sensitization.[1,4,6]

Complete natural extract detects sensitization to olive with high efficiency and sensitivity:

- Olive pollen t9

Components can help explain multiple positive pollen extract tests and resolve:[1,6,10]

- True co-sensitization to various pollens
- Cross-reactivity caused by profilins, polcalcins or CCD

Specific olive pollen components:[1,2,7]

- Ole e 1 – Trypsin inhibitor
- Ole e 7 – Lipid transfer protein
- Ole e 9 – 1,3 beta-glucanase

Components explaining cross-reactivity between various pollens:[6,8,10]

- Polcalcin
- Profilin
- MUXF3 (CCD)

Suggested test profiles

ImmunoCAP®
COMPLETE EXTRACTS

t9

ImmunoCAP®
Allergen COMPONENTS

Ole e 1, Ole e 7, Ole e 9

Ole e 1	Ole e 7	Ole e 9
· Trypsin inhibitor like protein · Major olive pollen allergen · Marker also for ash, liliac and privet sensitization	· nsLTP · Associated with severe respiratory reactions, induced by high exposure · Limited cross-reactivity to other nsLTPs	· 1,3 beta-glucanase · Relevant component in highly exposed populations · Associated with severe respiratory reactions

MARKERS FOR CROSS-REACTIVITY

ImmunoCAP®
Allergen COMPONENTS

Phl p 7	Phl p 12	MUX F3
· Polcalcin · Homologue of Ole e 3 · Unique to pollen · Very similar in all species	· Profilin · Homologue of Ole e 2 · Present in all pollens and plant foods · Very similar in all species	· CCD marker · Present on natural allergens from pollens, venoms and foods of plant origin · Not present on recombinant components · Rarely clinically relevant

· Grass profilins and polcalcins can replace the corresponding olive components due to the high degree of similarity

Did you know that?

- Pollen of olive tree (*Olea europaea*) is one of the most important causes of seasonal respiratory allergy in the Mediterranean area.[1,7]
- Sensitization to olive pollen normally varies between 5–40 % in olive pollen areas.
- More than 70 % of patients with sensitization to olive pollen have IgE antibodies to Ole e 1. The frequency of sensitization to Ole e 7 and Ole e 9 varies strongly between different areas (0–50 %).
- Sensitization to the cross-reactive allergens profilin, polcalcin and CCD is usually less frequent (< 20 %).[1,7,8]
- Ole e 7 is a non-specific lipid transfer protein (nsLTP) with limited homology and cross-reactivity to other nsLTPs.[8,11]
- The allergen composition of olive pollen extracts for SIT may vary significantly from producer to producer, especially with respect to Ole e 7 and Ole e 9.[2,10]
- Allergy diagnosis in patients exposed to multiple pollen species is complex and misdiagnosis is often a cause for unsuccessful specific immunotherapy treatment.[4,10,12]
- Up to 30 % of patients suffering from pollinosis simultaneously present allergy to vegetables.[4,7]
- Olive pollen allergy is common while olive fruit allergy is extremely rare.
- Ole e 1 is also a marker for sensitization to ash pollens, as well as privet,and lilac pollens since they are closely botanically related.[3,5,8,9]
- The ash pollen season overlaps with the birch pollen season in many areas. By testing with Ole e 1 and Bet v 1 (major birch pollen allergen) one can identify the true cause of the reaction.[5,6]

Find out more about olive pollen allergy to improve patient management

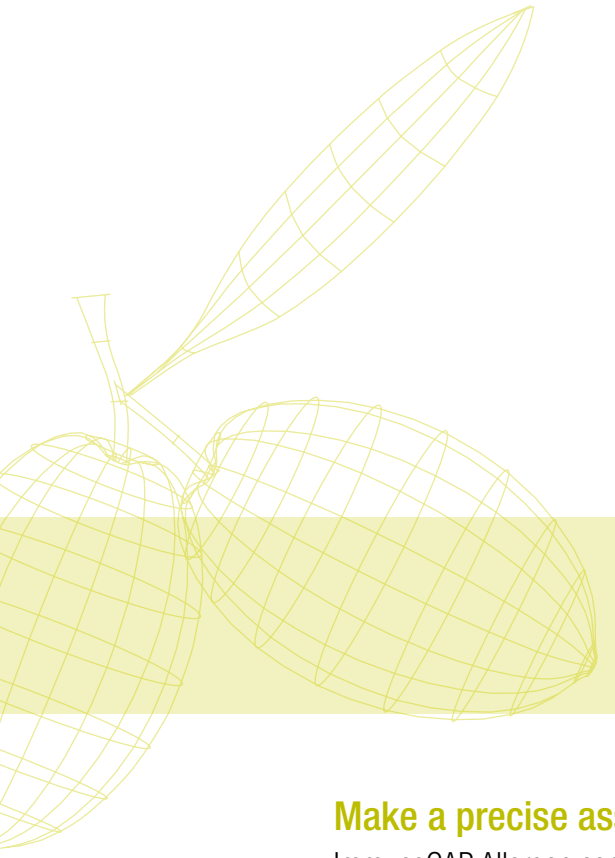
Identify primary sensitizations and understand cross-reactivity between different pollens in order to:

- Facilitate identification of patients and selection of appropriate extracts for immunotherapy [10,12]
  - Indications for SIT should be based on documented sensitization to specific olive pollen components.
  - Ideally the SIT extract should contain high concentrations of the matching olive pollen components.

Benefits for the patient and patient management:

A well-founded olive pollen diagnosis and proper immunotherapy can:

- Reduce allergic symptoms
- Improve the quality of life



Make a precise assessment

ImmunoCAP Allergen components help you differentiate between ”true” allergies and cross-reactivity

Make a substantiated decision

A better differentiation helps you give relevant advice and define the optimal treatment

Make a difference

More informed management helps you improve the patient’s well-being and quality of life

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