ImmunoCAP®

New Horizons – Allergy –

The diagnostic value of IgE antibody measurements to peanut allergen components

Join us exploring the frontiers of allergy research

Clinical background

Peanut food allergy is a major public health problem because of its severity and prevalence, which is estimated to be 0.5% to 1.8% depending on the population group studied. Peanut is the most common food to cause fatal and near-fatal food allergy.

Useful diagnostic tests for food allergy are *in vitro* serum food-specific IgE assays, skin-specific IgE determination, basophil activation tests and oral food challenges.

Currently, the only way to assess a peanut sensitization is the use of native peanut extracts. Because of variability of the raw material linked to its origin and conditions of production and storage, investigators are confronted with a lack of standardization of the material used both for *in vitro* and *in vivo* testing. Production of recombinant allergens is a promising way to obtain biological material with consistent and standardized properties and will enable further characterization of the peanut-allergic patient.

Utilizing the recombinant allergens Ara h 1-3, rAra h 8, a Bet v 1-homologous panallergen, as well as nsLTP (rPru p 3), will be of value in the assessment of peanut allergy.

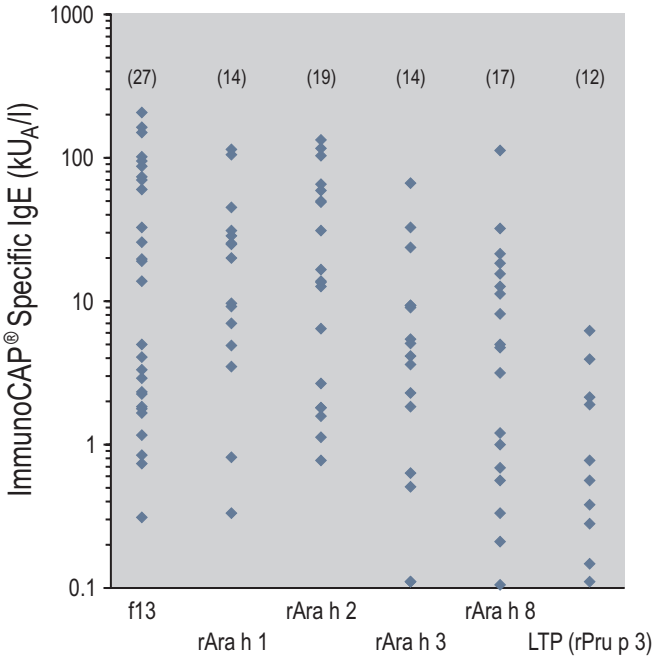


Figure. 27 peanut patients from Sweden with a positive IgE test to ImmunoCAP® f13 Peanut were tested for IgE against peanut components, ImmunoCAP® f422 rAra h 1, f423 rAra h 2, f424 rAra h 3, Rf352 rAra h 8 and an nsLTP, f420 rPru p 3. Results in kU_A/l.

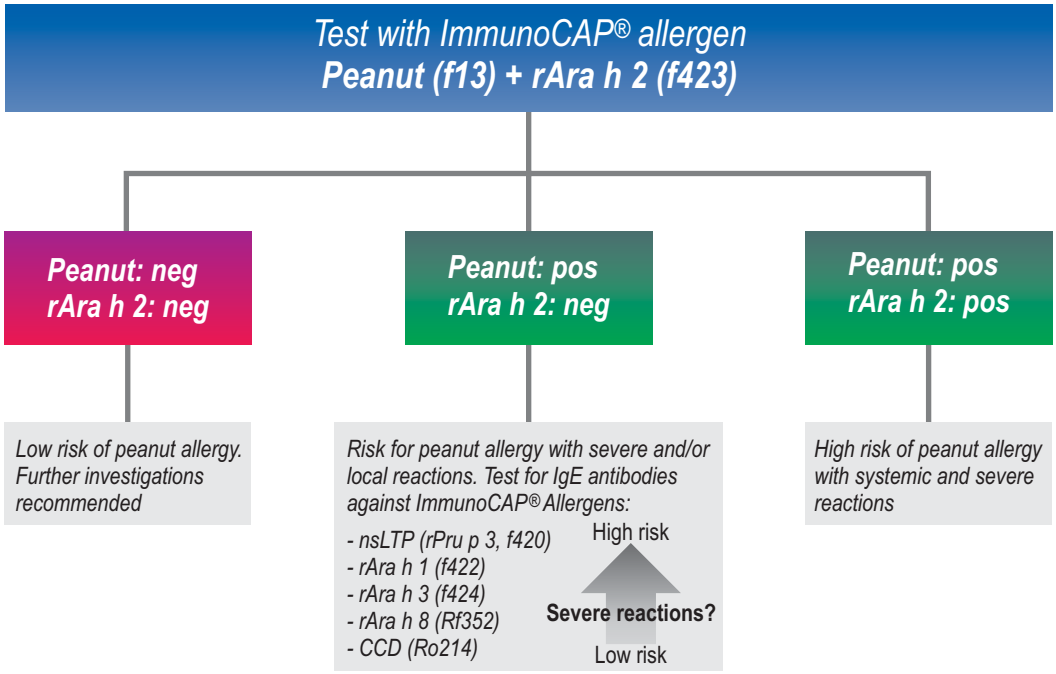
Reference: New Horizons Number 3, 2007

Product List

ImmunoCAP® for IgE antibody determination to peanut components

Product		Code	Size	Art. No.
rAra h 1 (recombinant, Peanut)	*Arachis hypogaea*	f422	10	14-4963-01
rAra h 2 (recombinant, Peanut)	*Arachis hypogaea*	f423	10	14-4964-01
rAra h 3 (recombinant, Peanut)	*Arachis hypogaea*	f424	10	14-4965-01
rPru p 3 (recombinant, Peach)	*Prunus persica*	f420	10	14-4961-01
For research use only				
rAra h 8 (recombinant, Peanut)	*Arachis hypogaea*	Rf352	10	14-5341-10

Suspicion of peanut allergy. Is it allergy? Risk for severe reactions?



Ara h 1 (vicilin, 7S globulin) **f422 ImmunoCAP® rAra h 1**

- A marker for sensitization to peanut vicilin (a storage protein) with potential cross-reactivity to other plant vicilins.
- Sometimes associated with clinical symptoms.

Ara h 2 (conglutin, 2S albumin) **f423 ImmunoCAP® rAra h 2**

- A marker for sensitization to peanut conglutin (a storage protein).
- Often associated with systemic and more severe reactions.
- Associated with cross-reactivity to tree nut allergens e.g. almond and brazil nut.

Ara h 3 (glycinin, 11S globulin) **f424 ImmunoCAP® rAra h 3**

- A marker for sensitization to peanut glycinin (a storage proteins) with potential cross-reactivity to other plant 11S globulins.
- Sometimes associated with clinical symptoms.
- Associated with cross-reactivity to lupin and soybean.

Ara h 8 (PR-10 protein, Bet v 1 homologue) **Rf352 ImmunoCAP® rAra h 8**

- A marker for sensitization to PR-10 proteins.
- A heat labile protein, cooked foods are often tolerated.
- Often associated with local symptoms such as oral allergy syndrome (OAS).

nsLTP (non-specific Lipid Transfer Protein, nsLTP) **f420 ImmunoCAP® rPru p 3**

- A marker for sensitization to LTPs.
- A protein stable to heat and digestion, and thus frequently also giving reactions when present in cooked food.
- Often associated with systemic and more severe reactions in addition to OAS.

CCD (MUXF3) **Ro214 ImmunoCAP® MUXF3**

- A marker for sensitization to cross-reactive carbohydrate determinants (CCD).
- Rarely associated with clinical symptoms.

References: www.allergome.org

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