

Allergen components

The term Allergen component is used for products based on molecular allergens purified from either their natural source (native) or biotechnologically produced as recombinant proteins.

By using tests for single allergenic components as a complement to more traditional IgE antibody tests, further clinically relevant information can be gained.

ImmunoCAP Allergen components are useful tools when investigating and explaining allergic reactions more in detail and to determine if they are caused by cross-reacting IgE antibodies to different allergens.

ImmunoCAP® Allergen Components – Allergen components:

OCCUPATIONAL COMPONENTS

- rHev b 1 Latex *Hevea brasiliensis* k215
- rHev b 3 Latex *Hevea brasiliensis* k217
- rHev b 5 Latex *Hevea brasiliensis* k218
- rHev b 6.01 Latex *Hevea brasiliensis*
- rHev b 6.02 Latex *Hevea brasiliensis*
- rHev b 8 Profilin, Latex *Hevea brasiliensis* k221
- rHev b 9 Latex *Hevea brasiliensis* k222
- rHev b 11 Latex *Hevea brasiliensis* k224

ENZYMES OCCUPATIONAL COMPONENTS

- Alkalase *Bacillus* spp. k205
- nAna c 2 Bromelain, Pineapple *Ananas comosus* k202
- nAsp o 21 alpha-amylase *Aspergillus oryzae* k87
- nCar p 1 Papain, Papaya *Carica papaya* k201
- nGal d 4 Lysozyme, Egg *Gallus* spp. k208
- Maxatase *Bacillus licheniformis* k204
- Savinase *Bacillus* spp. k206
- nSus s Pepsin, Swine *Sus scrofa* k213

FOOD COMPONENTS

- rAct d 8 PR-10, Kiwi *Actinidia deliciosa* f430
- rAna o 3 Cashew nut *Anacardium occidentale* f443
- rApi g 1.01 PR-10, Celery *Apium graveolens* f417
- rAra h 1 Peanut *Arachis hypogaea* f422
- rAra h 2 Peanut *Arachis hypogaea* f423
- rAra h 3 Peanut *Arachis hypogaea* f424
- rAra h 8 PR-10, Peanut *Arachis hypogaea* f352
- rAra h 9 LTP, Peanut *Arachis hypogaea* f427
- rBer e 1 Brazil nut *Bertholletia excelsa* f354
- nBos d 4 alpha-lactalbumin, Milk *Bos* spp. f76
- nBos d 5 beta-lactoglobulin, Milk *Bos* spp. f77
- nBos d 8 Casein, Milk *Bos* spp. f78

- nBos d Lactoferrin, Milk Bos spp. f334
- rCor a 1 PR-10, Hazel nut Corylus avellana f428
- rCor a 8 LTP, Hazel nut Corylus avellana f425
- nCor a 9, Hazel nut Corylus avellana f440
- rCor a 14, Hazel nut Corylus avellana f439
- rCyp c 1 Carp Cyprinus carpio f355
- rGad c 1 Cod Gadus morhua f426
- nGal d 1 Ovomuroid, Egg Gallus spp. f233
- nGal d 2 Ovalbumin, Egg Gallus spp. f232
- nGal d 3 Conalbumin, Egg Gallus spp. f323
- rGly m 4 PR-10, Soy Glycine max f353
- nGly m 5 beta-conglycinin, Soy Glycine max f431
- nGly m 6 Glycinin Glycine max f432
- rJug r 1 Walnut Juglans regia f441
- rJug r 3 LTP, Walnut Juglans regia f442
- rMal d 1 PR-10, Apple Malus domestica f434
- rMal d 3 LTP, Apple Malus domestica f435
- rPen a 1 Tropomyosin, Shrimp Penaeus aztecus f351
- rPru p 1 PR-10, Peach Prunus persica f419 10
- rPru p 3 LTP, Peach Prunus persica f420 10
- rPru p 4 Profilin, Peach Prunus persica f421
- rTri a 14 LTP, Wheat Triticum aestivum f433
- rTri a 19 Omega-5 Gliadin, Wheat Triticum spp. f416
Gliadin f98
- MUXF3 CCD, Bromelain o214

ALTERNARIA COMPONENTS

- Alternaria alternata – m6
- rAlt a1 – m229

ASPERGILLUS COMPONENTS

- Asperillusfumigatus – m3
- rAsp f 1 – m218
- rAsp f 2 – m219
- rAsp f 3 – m220
- rAsp f 4 – m221
- rAsp f 6 – m222

BIRCH COMPONENTS

- Betula verrucosa (Silver Birch) – t3
- rBet v 1 (PR-10) – t215
- rBet v 2 (Profilin) t216
- rBet v 4 (Ca binding protein) t220
- rBet v 6 – t225

BRAZIL COMPONENTS

- Brazil Nut – f18
- rBer e 1 (Storage protein 2S albumin) – f354

CAT COMPONENTS

- Cat dander – e1
- rFel d 1 (Uteroglobulin) – e94
- nFel d 2 (Serum Albumin) – e220

CELERY COMPONENTS

- Celery – f85
- rApi g 1.01 (PR-10) f417

COW'S MILK COMPONENTS

- Cow's milk allergen – f2
- nBos d 4 (a-lactalbumin) – f76
- nBos d 5 (b-lactoglobulin) – f77
- nBos d 6 (BSA cow) – e204
- nBos d 8 (Casein) – f78
- nBos d lactoferrin (Lactoferrin) – f334

DOG COMPONENTS

- Dog dander – e5
- rCan f 1 (Lipocalin) – e101
- rCan f 2 (Lipocalin) – e102
- nCan f 3 (Serum Albumin) – e221

EGG COMPONENTS

- egg white (Gallus domesticus)- f1
- egg yolk – f75
- nGal d 1 (Ovomucoid) – f233
- nGal d 2 (Ovalbumin) – f232
- nGal d 3 (Conalbumin) – f323
- nGal d 4 (Lysozyme)- k208

FISH COMPONENTS

- Cod – f3
- Carp (Cyprinus carpio)
- rCyp c 1 (Parvalbumin)- f355
- Cod (Gadus morhua)
- rGad c 1 (Parvalbumin) – f426

HAZELNUT COMPONENTS

- Hazel Nut (Corylus avellana) – f17

- rCor a 1 (PR-10) – f428
- rCor a 8 (LTP) – f425

HOUSE DUST MITE COMPONENTS

- House Dust Mite (*Dermatophagoides pteronyssinus*) – d1
- nDer p 1 – d202
- rDer p 2 – d203
- rDer p 10 (Tropomyosin) – d205

KIWI COMPONENTS

- Kiwi (*Actinidia deliciosa*) – f84
- rAct d 8 (PR10) – f430

LATEX COMPONENTS

- Latex (*Hevea*) k82
- rHev b 1 – k215
- rHev b 3 – k217
- rHev b 5 – k218
- rHev b 6.01 – k219
- rHev b 6.02 – k220
- rHev b 8 (Profilin) – k221
- rHev b 9 – k222
- rHev b 11 – k224

OLIVE COMPONENTS

- Olive (*Olea europaea*)- t9
- nOle e 1 – t224

PEACH COMPONENTS

- >Peach (*Prunus persica*) – f95
- rPru p 1 (PR-10) – f419
- rPru p 3 (LTP) – f420
- rPru p 4 (Profilin) – f421

PEANUT COMPONENTS

- Peanut (*Arachis hypogaea*) – f13
- rAra h 1 (7S globulins) – f422
- rAra h 2 (2S albumins) – f423
- rAra h 3 (11S globulin) – f424
- rAra h 8 (PR-10) – f352
- rAra h 9 (LTP) – f427

SHRIMP COMPONENTS

- Shrimp (*Penaeus aztecus*) – k24
- rPen a 1 (Tropomyosin) – f351

SOYBEAN COMPONENTS

- Soybean (*Glycin max*) – f14
- rGly m 4 (PR-10) – f353
- nGly m 5 (beta-conglycinin) – f431
- nGLy m 6 (glycinin) – f432

TIMOTHY GRASS COMPONENTS

- rPhl p 1 (Grass Group 1) – g205
- rPhl p 2 (Grass Group 2) – g206
- nPhl p 4 (Grass Group 5) – g208
- rPhl p 5b – g215
- rPhl p 6 (Ca Binding Protein) – g209
- rPhl p 7 – g210
- rPhl p 11 (Profilin) – g211
- rPhl p 12 – g212

VENOM COMPONENTS

- rApi m 1 (Phospholipase A2, Honey Bee) – I208
- rPol d 5 (European Paper Wasp) – i210
- rVes v 5 (Common wasp) – i209
- rVes v 1 (Phospholipase A1, Common Wasp) – i211

Proteins found in insect venoms. Specific markers particularly important when considering venom immunisation.

WALL PELLITORY COMPONENTS

- Wall pellitory (*Parietaria judaica*)- w21
- rPar j 2 (LTP) – w211

WHEAT COMPONENTS

- Wheat (*Triticum aestivum*) – f4
- rTri a 19 Omega-5 Gliadin – f416

PR-10 PROTEINS

- rBet v 1 – t215
- rCor a 1 – f428
- rPru p 1 – f419
- rGly m 4 – f353
- rAra h 8 – f352
- rApi g 1.01 – f417
- rAct d 8 – f430

A heat labile protein, cooked foods are often tolerated. Often associated with local symptoms such as Oral Allergy Syndrome (OAS). Often associated with allergic reactions to fruit and Vegetables in Northern Europe.

LIPID TRANSFER PROTEINS

- rPru p 3 – f420
- rCor a 8 – f425
- rAra h 9 – f427
- rPar j 2 – w211

A stable protein to heat and digestion causing reactions to cooked foods. Often associated with systemic and more severe reactions in addition to OAS. Often associated with allergic reactions to fruit and vegetables in Southern Europe.

PROFILINS

- rBet v 2 – t216
- rPru p 4 – f421
- rPhl p 12 – g212
- rHev b 8 – k221

Seldom associated with clinical symptoms but may cause demonstrable or even severe reactions in a small minority of cases.

POLCALCINS

- rBet v 4 – t220
- rPhl p 7 – g210

Ca binding protein

SEED STORAGE PROTEINS

- rAra h 2 (2S albumins) – f423
- rBer e 1 (2S albumins) – f354
- nGly m 5 (beta-glycinin) – f431
- nGly m 6 (glycinin) – f432
- rAra h 1 (7S globulins) – f422
- rAra h 3 (11S globulin) – f424
- rTri a 19 (Omega-5 Gliadin) – f416

Protein found in seeds serving as source material during growth of new plant. Often stable and heat resistant proteins causing reactions also in cooked foods.

GLYCAN DETERMINANTS

- MUXF3 CCD (Bromelin) -o214

A marker for sensitisation to cross reactive-reactivity between species. Seldom associated with clinical symptoms but may cause demonstrable or even severe reactions in a small minority of patients.

LIPOCALINS

- rCan f 1 – e101
- rCan f 2 – e102

Very stable proteins. Allergen components displaying limited cross-reactivity between species.

PARVALBUMINS

- rCyp c 1 (Carp) – f355
- rGad c 1 (Cod) – f426

A major allergen in fish. A marker for cross-reactivity among different species of fish and amphibians. A protein stable to heat and digestion causing reactions to cooked foods.

SERUM ALBUMINS

- nBos d 6 (Serum Albumin cow) – e204
- nFel d 2 (Serum Albumin cat) – e220
- nCan f 3 (Serum Albumin dog) – e221
- nSus s (Serum Albumin pig) – e222

A common protein present in different biological fluids and solids. Cross-reactions between albumins from different animal species are well known for example between cat, dog, cow and pork.

TROPOMYOSINS

- rPen a 1 – f351
 - rDer p 10 – d205
- An actin-binding protein in muscle fibres. A marker for cross-reactivity between crustaceans, mites and cockroach.