IMMULITE 2000/2000 XPi Immunoassay Systems

Allergy menu

Make allergy testing feel routine

SIEMENS Healthineers

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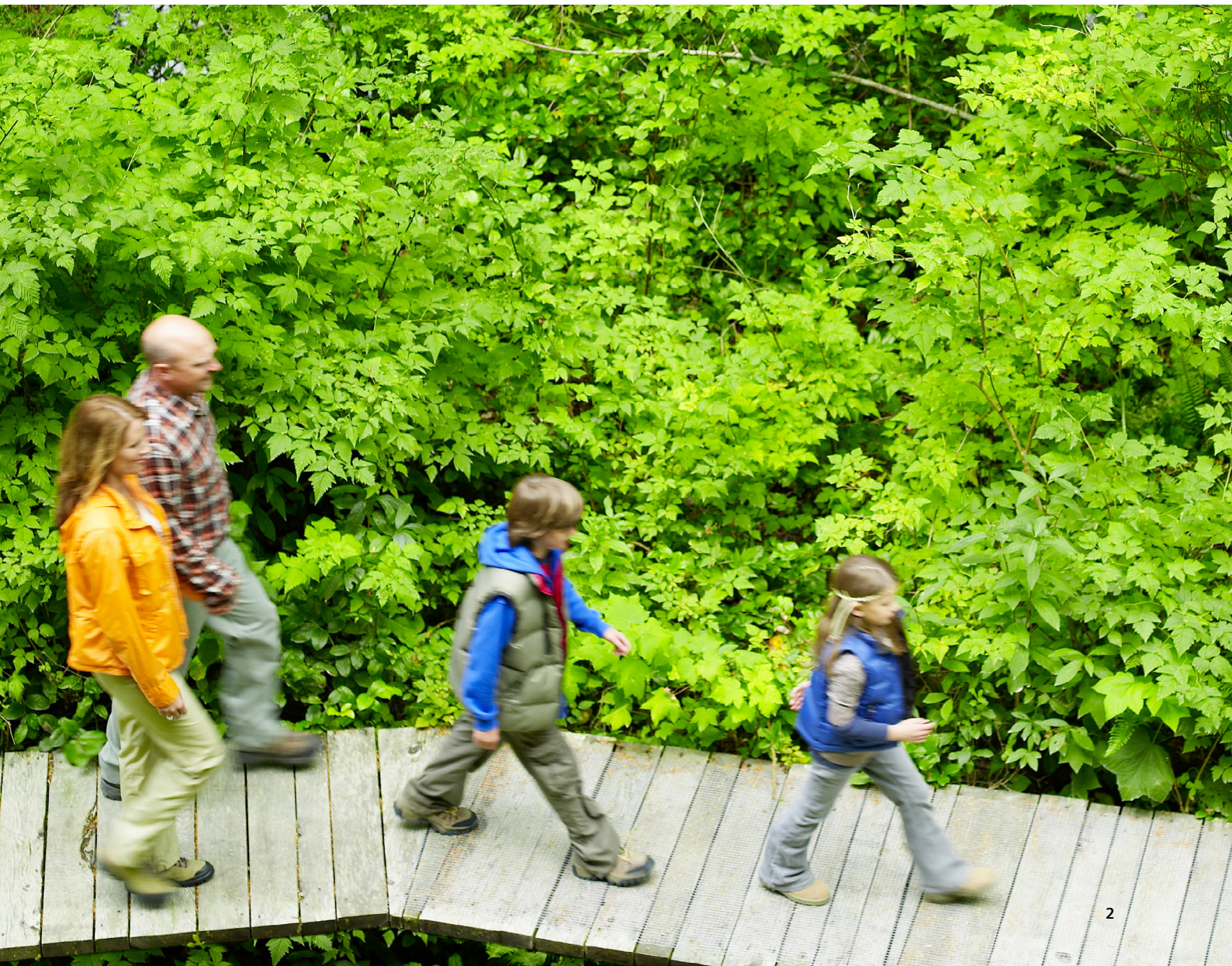


Allergy: the basics

An allergy is the body's response to various substances that are otherwise harmless, and that lead to the production of allergen-specific IgE antibodies. Allergic reactions can vary in intensity from mild to severe, with anaphylaxis representing the most extreme and potentially life-threatening form. Allergic manifestations include allergic asthma, allergic rhinitis, allergic conjunctivitis, allergic eczema (atopic dermatitis), and anaphylaxis—these presentations may differ between adults and children.

The prevalence of allergies has increased in recent years, with the World Allergy Organization estimating that 20% of the population in most developed countries suffer from IgE-mediated allergic diseases. This places significant financial burdens on clinicians and hospital resources, especially in emergency situations.[1]

Allergic diseases are among the most common chronic conditions globally. Estimates suggest that 10–30% of the world's population is affected by allergic disorders such as asthma, atopic dermatitis, food allergy, and allergic rhinitis.[1,2]

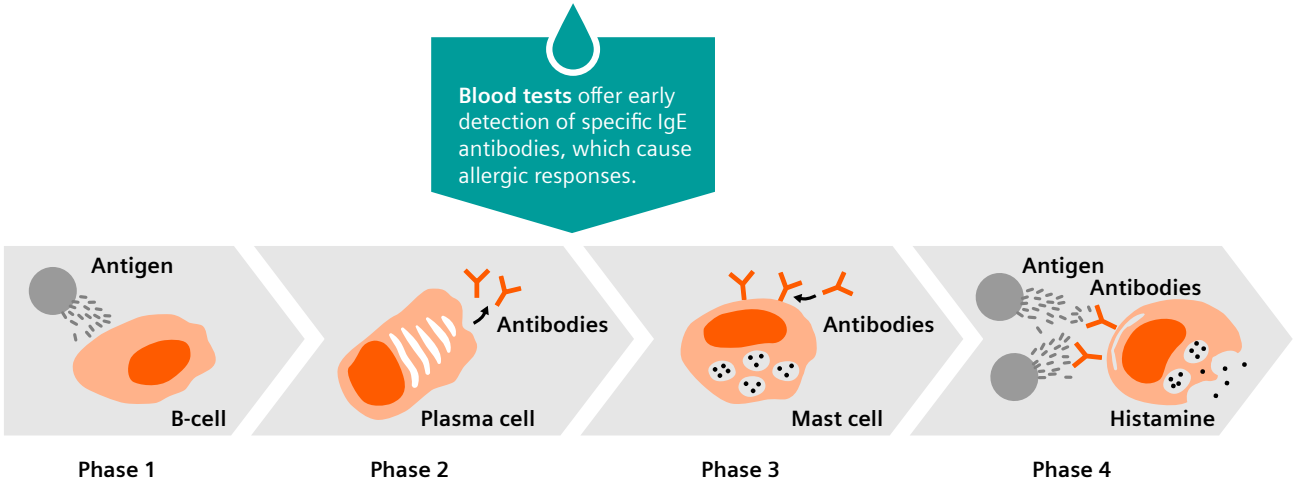
In 2024, 31.7% of adults had a diagnosed seasonal allergy, diagnosed eczema, or a diagnosed food allergy.[6] This emphasizes the importance of adults with suspected food allergies undergoing appropriate confirmatory testing and counseling to prevent unnecessary food avoidance and ensure a satisfactory quality of life.[3]

Allergy diagnosis

Testing for allergies can be carried out through either in vivo or in vitro methods. The combination of in vitro testing and/or skin prick testing (SPT) is used as part of initial diagnostic workup. Both approaches have their advantages and limitations, and it is advisable to conduct testing along with a thorough clinical history and physical examination. The choice of the testing method should be based on the specific clinical scenario for each patient.[4,5]

The progression toward an allergic reaction can be delineated into four distinct phases, as outlined below. In phase 1, an allergen enters the body and is identified by a B-cell as a foreign substance. Phase 2 entails plasma cells generating IgE antibodies in response to the allergen identified in phase 1. During phase 3, specific IgE antibodies attach to mast cells, initiating the release of histamines, leukotrienes, and prostaglandins, as observed in phase 4. The release of these inflammatory mediators leads to a localized or systemic reaction known as the allergic response, which can be assessed through in vivo testing, such as SPT, or in vitro blood testing.

In vitro methods include the measurement of specific IgE antibodies, which are produced by plasma cells in phase 2 of the cycle. Consequently, serum testing can identify an individual's propensity to react to allergens and potentially correlate with clinical reactivity of the reaction without the necessity of inducing an allergic response, highlighting a crucial distinction between these two methods.



Allergy in children

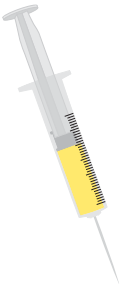
Clinicians face distinctive challenges in accurately and promptly diagnosing allergies in pediatric cases. The clinical presentation can lack specificity, with symptoms encompassing coughing, sneezing, stomachaches, cramps, and nausea. Combining traditional allergy testing methods with 3gAllergy sIgE serum testing may offer confirmation or challenge a differential diagnosis in intricate and nonspecific cases.

The impact of early and precise identification, monitoring, and treatment of allergies extends beyond the millions of children diagnosed with food and skin allergies each year—it directly influences the quality of life and attainment of developmental milestones.[7,8]

Allergy treatments[9]

Avoidance involves consciously removing allergens from the diet and/or environment, coupled with a hygiene and skin-care regimen. This serves as the primary treatment of all allergies.

Pharmacotherapy encompasses the use of second-generation antihistamines, referred to as non-sedative antihistamines (NSA). The notable advantage of most second-generation allergy drugs is their inability to cross the blood-brain barrier. Unlike their first-generation counterparts, they do not induce sedation and drowsiness. Both first- and second-generation antihistamines have proven effective in managing typical allergy symptoms, including rhinorrhea, congestion, itch, skin rashes, hives, and watery eyes.



Allergen-specific immunotherapies stand as a viable treatment option in eligible patients. Although outcomes may vary among individuals, immunotherapy is the sole treatment that has demonstrated effectiveness in curing specific types of allergic diseases. Traditionally, immunotherapy was exclusively performed by allergists/allergologists. However, in recent years, some pharmaceutical companies have introduced an innovative prescription service, allowing general practitioners to provide immunotherapy to their allergy patients.

Relationship between IgE levels and probability of clinical allergy

Results from 3gAllergy sIgE tests are expressed as quantitative values in kU/L, where concentrations equal to or greater than 0.10 kU/L signify the presence of specific IgE antibodies to the allergen. Conversely, a value below 0.10 kU/L indicates undetectable levels of allergen-specific IgE antibodies.

The assigned class number reflects the quantity of endogenous IgE specific to the chosen allergen. The table below provides both quantitative values and the interpretation of class results based on the standard scoring system.

It's important to note that the likelihood of clinically relevant allergy symptoms rises with increasing IgE antibody concentrations.[10] It is recommended to complement testing with a comprehensive clinical history and physical examination for a thorough assessment.

The standard classification system utilizes the following cutoffs:

Class	kU/L	Reactivity for Individual/Panel Allergen(s)
0*	<0.10	Absent or ND†
	0.10–0.34	Very low
I	0.35–0.69	Low
II	0.70–3.49	Moderate
III	3.50–17.49	High
IV	17.5–52.49	Very high
V	52.5–99.99	
VI	≥100	

**Class 0 in the standard system signifies: not detectable by second-generation assays.*

†ND: not detectable by IMMULITE 2000 3gAllergy assays.

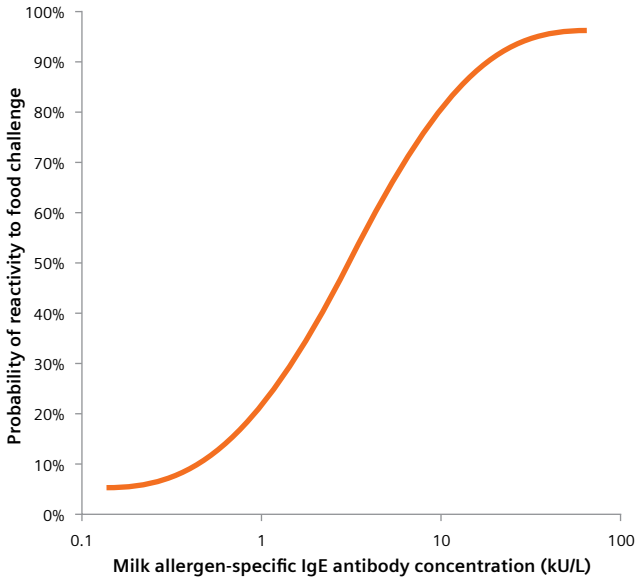
Clinical benefits of identifying allergen-specific IgE levels below 0.35 kU/L

Research suggests that detecting allergies in children at an earlier stage allows for timely intervention, potentially halting the progression of allergies to more severe conditions such as pulmonary obstructive disease.[11]

Evidence shows that even very low allergen-specific IgE (sIgE) levels below the traditional 0.35 kU/L threshold can provide valuable insights into allergy risk and progression. Modern high-sensitivity assays now detect sIgE as low as 0.10 kU/L, revealing that clinically relevant sensitizations, including food and venom reactions, may already be present in this range.[12]

In children, such low-level sensitizations have been linked to early predictors of the allergic march, with food allergen sIgE values of 0.10–0.34 kU/L associated with later development of atopic dermatitis and respiratory allergies.[13]

This highlights the importance of not overlooking low sIgE titers when aiming for early, precise, and personalized allergy diagnosis.



Source: Reference 10; data example for children aged 1 year

Kits and accessories

Description	Units	Catalog No.	SMN
Total IgE	200 tests	L2KIE2	10380873
	600 tests	L2KIE6	10380872

The IMMULITE 2000 Total IgE assay quantifies immunoglobulin E (IgE) levels in human serum, with a measurable range of 1to 2000 IU/mL. IgE antibodies are produced following sensitization to allergens, and the assessment of circulating total IgE serves as a valuable aid in the clinical diagnosis of IgE-mediated allergic conditions.[15]

Description	Units	Catalog No.	SMN
IMMULITE 2000 3gAllergy Specific IgE Universal Kit	600 tests	L2KUN6	10708840

The IMMULITE Specific IgE assay offers a reliable method for detecting allergen-specific IgE antibodies in human serum. These antibodies are typically produced after an individual becomes sensitized through exposure to allergens. This assay enables the quantitative analysis of IgE responses to a wide array of allergens and their molecular components. With access to over 300 allergen extracts, panels, and components, the IMMULITE system supports comprehensive allergy profiling.

Allergen Specific IgE Controls			
DC1LCM	*D. pteronyssinus*	Positive (1 vial of 4mL control serum)	10485104
DC2LCM	*D. farinae*	Positive (1 vial of 4mL control serum)	10485105
MC6LCM	*A. tenuis*	Positive (1 vial of 4mL control serum)	10485106
L2SNCCM		Negative (1 vial of 4mL control serum)	10485107

Diluents	Catalog No.	SMN
3gAllergy Specific IgE Sample Diluent	L2UNZ	10283033

Allergens

Name		Code	Size	Catalog No.	SMN
Animals					
Whole allergens					
Budgerigar Feathers	Melopsittacus undulatus	E78	20	E78L2	10385662
Canary Feathers	Serinus canarius	E201	20	E201L2	10385643
Cat Dander-Epithelium	Felis domesticus	E1	40	E1L4	10385642
Chicken Feathers	Gallus gallus domesticus	E85	20	E85L2	10385670
Cow Dander	Bos spp.	E4	20	E4L2	10385651
Dog Dander	Canis familiaris	E5	40	E5L4	10385653
Dog Epithelium	Canis familiaris	E2	40	E2L4	10385648
Duck Feathers	Anas platyrhynchos	E86	20	E86L2	10385671
Goat Epithelium	Capra hircus	E80	20	E80L2	10385664
Goose Feathers	Anser anser	E70	20	E70L2	10385655
Guinea Pig Epithelium	Cavia porcellus	E6	20	E6L2	10385654
Hamster Epithelium	Cricetus cricetus	E84	20	E84L2	10385669
Horse Dander	Equus caballus	E3	40	E3L4	10385650
Mouse Epithelium	Mus musculus	E71	20	E71L2	10385656
Mouse Urine	Mus musculus	E72	20	E72L2	10385657
Parrot Feathers	Agapornis rosa collie	E91	20	E91L2	10385675
Pigeon Droppings	Columba palumbus	E7	20	E7L2	10385663
Rabbit Epithelium	Oryctolagus spp.	E82	40	E82L4	10385667
Rat	Rattus rattus	E87	20	E87L2	10385672
Rat Epithelium	Rattus norvegicus	E73	20	E73L2	10385658
Rat Serum Proteins	Rattus rattus	E75	20	E75L2	10385660
Rat Urine	Rattus rattus	E74	20	E74L2	10385659
Sheep Epithelium	Ovis aries	E81	20	E81L2	10385665
Swine Epithelium	Sus scrofa domesticus	E83	20	E83L2	10385668
Turkey Feathers	Meleagris gallopavo	E89	20	E89L2	10385674
Allergen components					
nCan f 1 – Canis familiaris	Dog	A174	20	A174L2	10360570
nCan f 3 – Canis familiaris	Dog	E221	20	E221L2	10370456
nFel d 1 – Felis domesticus	Cat	A345	20	A345L2	10360576
nFel d 2 – Felis domesticus	Cat	E220	20	E220L2	10370455
Mixed Allergen Panels					
Animal Panel 1	Cat Dander-Epithelium, Horse Dander, Cow Dander, Dog Dander E1, E3, E4, E5	EP1	40	EP1L4	10385677

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Dust					
Whole allergens					
House Dust (Greer)		H1	40	H1L4	10385940*
Mixed Allergen Panels					
Dust Panel 1	Dermatophagoides pteronyssinus, Dermatophagoides farinae, House dust (Greer), Cockroach D1, D2, H1, I6	HP1	40	HP1L4	10385948
Fruits & vegetables					
Whole allergens					
Apple	Malus spp.	F49	40	F49L4	10385832
Apricot	Prunus armeniaca	F237	20	F237L2	10385738
Asparagus	Asparagus officinalis	F261	20	F261L2	10385755
Avocado	Persea americana	F96	20	F96L2	10385875
Banana	Musa spp.	F92	20	F92L2	10385871
Blueberry	Vaccinium spp.	F288	20	F288L2	10385776
Broccoli	Brassica oleracea var cultivar	F260	20	F260L2	10385754
Cabbage	Brassica oleracea var capitata	F216	20	F216L2	10385720
Cantaloupe	Cucumis melo	F102	20	F102L2	10385685
Carrot	Daucus carota	F31	40	F31L4	10385797
Cauliflower	Brassica oleracea var botrytis	F291	20	F291L2	10385779
Celery	Apium graveolens	F85	20	F85L2	10385862
Cherry	Prunus avium	F242	20	F242L2	10385740
Coconut	Cocos nucifera	F36	20	F36L2	10385811
Cucumber	Cucumis sativus	F244	20	F244L2	10385741
Garlic	Allium sativum	F47	20	F47L2	10385829
Grape	Vitis spp.	F259	20	F259L2	10385751
Grapefruit	Citrus paradisi	F209	20	F209L2	10385713
Green Pepper	Capsicum annuum	F263	20	F263L2	10385757
Kiwi Fruit	Actinidia chinensis	F84	20	F84L2	10385861
Lemon	Citrus limon	F208	20	F208L2	10385712

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Fruits & vegetables (cont.)					
Lettuce	Lactuca sativa	F215	20	F215L2	10385719
Lime	Citrus aurantifolia	F306	20	F306L2	10385789
Mango	Mangifera indica	F91	20	F91L2	10385870
Melon	Cucumis melo + citrus lanatus	F87	20	F87L2	10385864
Mushroom	Agaricus spp.	F212	20	F212L2	10385716
Onion	Allium cepa var cepa	F48	20	F48L2	10385830
Orange	Citrus sinensis	F33	40	F33L4	10385803
Peach	Prunus persica	F95	20	F95L2	10385874
Pear	Pyrus spp.	F94	20	F94L2	10385873
Pineapple	Ananas comosus	F210	20	F210L2	10385715
Plum	Prunus americana	F255	20	F255L2	10385748
Potato	Solanum tuberosum	F35	20	F35L2	10385809
Pumpkin	Cucurbita maxima	F225	20	F225L2	10385730
Spinach	Spinacia oleracea	F214	20	F214L2	10385718
Strawberry	Fragaria spp.	F44	20	F44L2	10385827
Sugar Cane	Saccharum officinarum	F21	20	F21L2	10385724
Sweet Potato	Ipomoea batatas	F54	20	F54L2	10385836
Tomato	Lycopersicon esculentum	F25	40	F25L4	10385753
Watermelon	Citullus lanatus	F329	20	F329L2	10385799
Seeds, legumes, & nuts					
Almond	Prunus dulcis	F20	20	F20L2	10385714
Barley	Hordeum vulgare	F6	20	F6L2	10385845
Brazil Nut	Bertholletia excelsa	F18	20	F18L2	10385701
Buckwheat	Fagopyrum spp.	F11	20	F11L2	10385689
Cashew	Anacardium occidentale	F202	20	F202L2	10385706
Chestnut	Castanea spp.	F299	20	F299L2	10385782
Corn	Zea mays	F8	40	F8L4	10385868
Gluten		F79	40	F79L4	10385855
Green Bean	Phaseolus vulgaris	F315	20	F315L2	10385794
Green Pea	Pisum sativum	F12	20	F12L2	10385690
Hazelnut	Corylus avellana	F17	40	F17L4	10385699
Lima Bean	Phaseolus lunatus	F182	20	F182L2	10385700
Oat	Avena sativa	F7	20	F7L2	10385856

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Seeds, legumes, & nuts (cont.)					
Peanut	Arachis hypogaea	F13	40	F13L4	10385692
Pecan Nut	Carya illinoensis	F201	20	F201L2	10385705
Pine Nut	Pinus pinea	F253	20	F253L2	10385746
Pinto Bean	Phaseolus spp.	F300	20	F300L2	10385785
Pistachio	Pistacia vera	F203	20	F203L2	10385707
Red Kidney Bean	Phaseolus vulgaris	F287	20	F287L2	10385775
Rice	Oryza sativa	F9	40	F9L4	10385877
Rye	Secale cereale	F5	20	F5L2	10385841
Sesame Seed	Sesamum orientale (indicum)	F10	20	F10L2	10385687
Soybean	Glycine max	F14	40	F14L4	10385695
Walnut	Juglans spp.	F256	20	F256L2	10385749
Wheat	Triticum aestivium	F4	40	F4L4	10385834
White Bean	Phaseolus vulgaris	F15	20	F15L2	10385696
Spices					
Basil	Ocimum basilicum	F269	20	F269L2	10385760
Black Pepper	Piper nigrum	F280	20	F280L2	10385771
Chili Pepper	Capsicum fratescens	F279	20	F279L2	10385769
Cinnamon	Cinnamomum verum	F220	20	F220L2	10385725
Ginger	Zingifer officinale	F270	20	F270L2	10385762
Mustard	Brassica spp.	F89	20	F89L2	10385866
Oregano	Origanum vulgare	F283	20	F283L2	10385773
Parsley	Petroselinum crispum	F86	20	F86L2	10385863
Vanilla	Vanilla planifolia	F234	20	F234L2	10385735
Fish, shellfish, & mollusks					
Blue Mussel	Mytilus spp.	F37	20	F37L2	10385812
Chub Mackerel	Scomber japonicus	F50	20	F50L2	10385835
Clam	Mercenaria mercenaria	F207	20	F207L2	10385711
Codfish	Gadus morhua	F3	40	F3L4	10385815
Crab	Callinectes sapidus	F23	20	F23L2	10385739
Flounder	Platichthys spp.	F147	20	F147L2	10385693
Haddock	Melanogrammus aeglefinus	F42	20	F42L2	10385826
Halibut	Hippoglossus stenolepis	F303	20	F303L2	10385788
Lobster	Homarus americanus	F80	20	F80L2	10385857

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Fish, shellfish, & mollusks (cont.)					
Oyster	Crassotrea virginica	F290	20	F290L2	10385778
Perch	Sebastes spp.	F65	20	F65L2	10385843
Red Snapper	Lutjanus campechanus	F381	20	F381L2	10385813
Salmon	Salmo salar	F41	20	F41L2	10385825
Scallop	Pecten spp.	F338	20	F338L2	10385801
Shrimp	Penaeus spp.	F24	40	F24L4	10385745
Sole	Parophrys vetulus	F337	20	F337L2	10385800
Trout	Oncorhynchus mykiss	F204	20	F204L2	10385708
Tuna	Thunnus spp.	F40	20	F40L2	10385824
Eggs & fowl					
Chicken Meat	Gallus gallus domesticus	F83	20	F83L2	10385860
Egg	Gallus gallus domesticus	F245	20	F245L2	10385742
Egg White	Gallus gallus domesticus	F1	40	F1L4	10385704
Egg Yolk	Gallus gallus domesticus	F75	40	F75L4	10385847
Turkey Meat	Meleagris gallopavo	F284	20	F284L2	10385774
Meat					
Beef	Bos spp.	F27	20	F27L2	10385770
Lamb	Ovis aries	F88	20	F88L2	10385865
Pork	Sus scrofa domesticus	F26	20	F26L2	10385761
Milk					
Cheese, Cheddar		F81	20	F81L2	10385858
Cheese, Mold-type		F82	20	F82L2	10385859
Milk	Bos taurus	F2	40	F2L4	10385784
Whey	Bos taurus	F236	20	F236L2	10385737
Yogurt		F360	20	F360L2	10385810

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Miscellaneous					
Baker's Yeast	Saccharomyces cerevisiae	F45	20	F45L2	10385828
Brewer's Yeast	Saccharomyces cerevisiae	F403	20	F403L2	10385818
Cacao	Theobroma cacao	F93	20	F93L2	10385872
Chocolate	Theobroma cacao	F105	20	F105L2	10385686
Coffee	Coffea spp.	F221	20	F221L2	10385726
Malt	Hordeum vulgare	F90	20	F90L2	10385869
Allergen components					
rMal d 1 – Malus domestica	Apple	A464	20	A464L2	10483381
rMal d 4 – Malus domestica	Apple	A796	20	A796L2	10471077
rPru av 1 – Prunus avium	Cherry	A597	20	A597L2	10471072
rPru av 3 – Prunus avium	Cherry	A599	20	A599L2	10471074
rPru av 4 – Prunus avium	Cherry	A600	20	A600L2	10471075
Alpha Lactalbumin	Milk, Bos d 4, Bos taurus	F76	40	F76L4	10385849
Beta Lactoglobulin	Milk, Bos d 5, Bos taurus	F77	40	F77L4	10385851
Casein	Milk, Bos d 8, Bos taurus	F78	40	F78L4	10385853
nPru p 3 – Prunus persica	Peach	A603	20	A603L2	10368596
nAra h 1 – Arachis hypogaea	Peanut	F422	20	F422L2	11643846*
rAra h 2 – Arachis hypogaea	Peanut	F423	20	F423L2	11643681*
nAra h 3 – Arachis hypogaea	Peanut	F424	20	F424L2	11643847*
nAra h 6 – Arachis hypogaea	Peanut	F447	20	F447L2	11643848*
rAra h 8 – Arachis hypogaea	Peanut	F352	20	F352L2	11643849*
rAra h 9 – Arachis hypogaea	Peanut	F427	20	F427L2	11643850*
nPen m 1 – Penaeus monodon	Tiger shrimp	F351	20	F351L2	10385807
Mixed Allergen Panels					
Food Panel 1	Peanut, Hazelnut, Brazil Nut, Almond, Coconut F13, F17, F18, F20, F36	FP1	40	FP1L4	10385882
Food Panel 2	Codfish, Shrimp, Blue Mussel, Tuna, Salmon F3, F24, F37, F40, F41	FP2	40	FP2L4	10385889
Food Panel 3	Wheat, Oat, Corn, Sesame Seed, Buckwheat F4, F7, F8, F10, F11	FP3	40	FP3L4	10385891

*This product is under development and not commercially available. Its future availability cannot be ensured.

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Mixed Allergen Panels (cont.)					
Food Panel 5	Egg White, Milk, Codfish, Wheat, Peanut, Soybean F1, F2, F3, F4, F13, F14	FP5	40	FP5L4	10385897
Food Panel 6	Wheat, Rice, Sesame Seed, Buckwheat, Soybean F4, F9, F10, F11, F14	FP6	40	FP6L4	10385899
Food Panel 7	Egg White, Milk, Wheat, Rice, Peanut, Soybean F1, F2, F4, F9, F13, F14	FP7	40	FP7L4	10385903
Grasses					
Whole allergens					
Bahia Grass	Paspalum notatum	G17	20	G17L2	10385912
Bermuda Grass	Cynodon dactylon	G2	40	G2L4	10385917
Brome Grass	Bromus inermis	G11	20	G11L2	10385905
Canary Grass	Phalaris arundinacea	G71	20	G71L2	10385926
Common Reed Grass	Phragmites communis	G7	20	G7L2	10385927
Cultivated Oat Grass	Avena sativa	G14	20	G14L2	10385909
Cultivated Rye Grass	Sercale cereale	G12	40	G12L4	10385907
Cultivated Wheat Grass	Triticum aestivum	G15	20	G15L2	10385910
Johnson Grass	Sorghum halepense	G10	20	G10L2	10385904
June Grass (Kentucky Blue)	Poa pratensis	G8	40	G8L4	10385929
Meadow Fescue	Festuca elatior	G4	20	G4L2	10385920
Meadow Foxtail Grass	Alopecurus pratensis	G16	20	G16L2	10385911
Orchard Grass	Dactylis glomerata	G3	40	G3L4	10385919
Perennial Rye Grass	Lolium perenne	G5	40	G5L4	10385922
Red Top	Agrostis gigantea	G9	20	G9L2	10385930
Sweet Vernal Grass	Anthoxanthum odoratum	G1	20	G1L2	10385913
Timothy Grass	Phleum pratense	G6	40	G6L4	10385924
Velvet Grass	Holcus lanatus	G13	20	G13L2	10385908
Wild Rye Grass	Elymus condensatus	G70	20	G70L2	10385925

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Mixed Allergen Panels					
Grass Panel 1	Orchard Grass, Meadow Fescue, Perennial Rye Grass, Timothy Grass, June Grass (Kentucky Blue) G3, G4, G5, G6, G8	GP1	40	GP1L4	10385932
Grass Panel 2	Bermuda Grass, Perennial Rye Grass, Timothy Grass, June Grass (Kentucky Blue), Johnson Grass, Bahia Grass G2, G5, G6, G8, G10, G17	GP2	40	GP2L4	10385934
Grass Panel 3	Sweet Vernal Grass, Perennial Rye Grass, Timothy Grass, Cultivated Rye Grass, Velvet Grass G1, G5, G6, G12, G13	GP3	40	GP3L4	10385936
Grass Panel 4	Sweet Vernal Grass, Perennial Rye Grass, Common Reed Grass, Cultivated Rye Grass, Velvet Grass G1, G5, G7, G12, G13	GP4	40	GP4L4	10385938
Insects					
Whole allergens					
American Cockroach	Periplaneta americana	I206	20	I206L2	10385953
Cockroach	Blatella germanica & Supella longipalpa	I6	20	I6L2	10385959
Honey Bee Venom	Apis mellifera	I1	40	I1L4	10385950
Imported Fire Ant	Solenopsis invicta	I70	20	I70L2	10385960
Paper Wasp Venom	Polistes spp.	I4	20	I4L2	10385957
White-faced Hornet	Dolichovespula maculata	I2	20	I2L2	10385955
Yellow Hornet	Dolichovespula arenaria	I5	20	I5L2	10385958
Yellow Jacket Venom	Vespula spp.	I3	20	I3L2	10385956

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Mites					
Whole allergens					
Acarus siro	Acarus siro	D70	20	D70L2	10385635
Blomia tropicalis	Blomia tropicalis	D201	20	D201L2	10385631
Dermatophagoides farinae	House dust mite	D2	40	D2L4	10385633
Dermatophagoides microceras	House dust mite	D3	20	D3L2	10385634
Dermatophagoides pteronyssinus	House dust mite	D1	40	D1L4	10385630
Euroglyphus maynei	Euroglyphus maynei	D74	20	D74L2	10385639
Glycyphagus domesticus	Glycyphagus domesticus	D73	20	D73L2	10385638
Lepidoglyphus destructor	Lepidoglyphus destructor	D71	20	D71L2	10385636
Tyrophagus putrescentiae	Tyrophagus putrescentiae	D72	20	D72L2	10385637
Allergen components					
nDer f 1 – Dermatophagoides farinae	House dust mite	A295	20	A295L2	10360571
nDer f 2 – Dermatophagoides farinae	House dust mite	A302	20	A302L2	10360572
nDer p 1 – Dermatophagoides pteronyssinus	House dust mite	A310	20	A310L2	10360574
nDer p 2 – Dermatophagoides pteronyssinus	House dust mite	A316	20	A316L2	10360575
Molds					
Whole allergens					
Alternaria tenuis	Alternaria alternata (Alternaria tenuis)	M6	40	M6L4	10386042
Aspergillus fumigatus	Aspergillus fumigatus	M3	40	M3L4	10386036
Aspergillus niger	Aspergillus niger	M207	20	M207L2	10386023
Aureobasidium pullulans	Aureobasidium pullulans	M12	20	M12L2	10386013
Candida albicans	Candida albicans	M5	40	M5L4	10386040
Cephalosporium acremonium	Cephalosporium acremonium	M202	20	M202L2	10386020
Cladosporium herbarum	Cladosporium herbarum	M2	40	M2L4	10386027
Curvularia lunata	Curvularia lunata	M16	20	M16L2	10386017
Epicoccum purpurascens	Epicoccum purpurascens	M14	20	M14L2	10386015
Fusarium moniliforme	Fusarium moniliforme	M9	20	M9L2	10386046
Helminthosporium halodes	Helminthosporium halodes	M8	20	M8L2	10386045
Hormodendrum hordei	Hormodendrum hordei	M45	20	M45L2	10386037

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Whole allergens					
Mucor racemosus	Mucor racemosus	M4	20	M4L2	10386038
Penicillium brevicompactum	Penicillium brevi-compactum	M305	20	M305L2	10386030
Penicillium notatum	Penicillium notatum	M1	40	M1L4	10386019
Phoma betae	Phoma betae	M13	20	M13L2	10386014
Pityrosporum orbiculare	Pityrosporum orbiculare	M70	20	M70L2	10386043
Rhizopus nigricans	Rhizopus nigricans	M11	20	M11L2	10386012
Stemphylium botryosum	Stemphylium botryosum	M10	20	M10L2	10386011
Stemphylium solani	Stemphylium solani	M88	20	M88L2	10360577
Trichoderma viride	Trichoderma viride	M15	20	M15L2	10386016
Allergen components					
nAsp r 1 – Aspergillus restrictus	Aspergillus restrictus	A3050	20	A3050L2	10360573
Mixed Allergen Panels					
Mold Panel 1	Penicillium notatum, Cladosporium herbarum, Aspergillus fumigatus, Candida albicans, Alternaria tenuis M1, M2, M3, M5, M6	MP1	40	MP1L4	10386048
Occupational					
Whole allergens					
Latex	Hevea brasiliensis	K82	40	K82L4	10385996
Sunflower Seed	Helianthus annuus	K84	20	K84L2	10385998
Other analytes					
Whole allergens					
Tobacco	Nicotiana tabacum	O201	20	O201L2	10386050

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Trees					
Whole allergens					
Acacia	Acacia spp.	T19	20	T19L2	10386065
Alder	Alnus incana	T2	40	T2L4	10386083
Australian Pine	Casuarina equisetifolia	T73	20	T73L2	10386104
Bayberry/Sweet Gale	Myrica gale	T218	20	T218L2	10386073
Beech	Fagus americana	T5	20	T5L2	10386098
Birch	Betula nigra	T3	40	T3L4	10386087
Brazilian Peppertree	Schinus terebinthifolius	T401	20	T401L2	10386088
Cottonwood	Populus deltoides	T14	20	T14L2	10386059
Elm	Ulmus americana	T8	20	T8L2	10386112
Eucalyptus	Eucalyptus globulus	T18	20	T18L2	10386064
Hazelnut	Corylus americana	T4	40	T4L4	10386097
Italian Cypress	Cupressus sempervirens	T23	40	T23L4	10386079
Japanese Cedar	Cryptomeria japonica	T17	40	T17L4	10386063
Live Oak	Quercus virginiana	T103	20	T103L2	10386055
Loblolly Pine	Pinus taeda	T43	20	T43L2	10386094
Locust Tree	Robinia pseudoacacia	T280	20	T280L2	10386081
Maple	Acer saccharum	T1	20	T1L2	10386066
Melaleuca	Melaleuca quinquenervia (leucadendron)	T21	20	T21L2	10386075
Mesquite	Prosopis glandulosa	T20	20	T20L2	10386070
Mountain Cedar	Juniperus asheii (sabinoides)	T6	20	T6L2	10386100
Oak	Quercus alba	T7	40	T7L4	10386107
Oak Mix (Red, White, Black)	Quercus spp.	T77	20	T77L2	10386105
Olive	Olea europaea	T9	40	T9L4	10386115
Pecan	Carya illinoinensis	T22	20	T22L2	10386077
Poplar	Populus alba	T96	20	T96L2	10386113
Privet	Ligustrum vulgare	T210	20	T210L2	10386071
Queen Palm	Arecastrum romanzoffianum	T72	20	T72L2	10386103
Red Cedar	Juniperus virginiana	T219	20	T219L2	10386074
Red Maple	Acer rubrum	T27	20	T27L2	10386080
Red Mulberry	Morus rubra	T71	20	T71L2	10386102

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Trees (cont.)					
Sweet Gum	Liquidambar styraciflua	T211	20	T211L2	10386072
Sycamore	Platanus occidentalis	T11	20	T11L2	10386057
Walnut	Juglans nigra	T10	20	T10L2	10386056
White Ash	Fraxinus americana	T15	20	T15L2	10386060
White Bald Cypress	Taxodium distichum	T37	20	T37L2	10386085
White Hickory	Carya alba	T41	20	T41L2	10386092
White Mulberry	Morus alba	T70	20	T70L2	10386101
White Pine	Pinus strobus	T16	20	T16L2	10386061
Willow	Salix nigra	T12	20	T12L2	10386058
Allergen components					
nBet v 1 – Betula verrucosa	Betula verrucosa, Birch	A89	20	A89L2	10368597
rBet v 2 – Betula verrucosa	Betula verrucosa, Birch	A127	20	A127L2	10484690
nOle e 1 – Olea europea	Olea europaea, Olive	A482	20	A482L2	10370467
Mixed Allergen Panels					
Tree Panel 1	Maple, Birch, Oak, Elm, Walnut T1, T3, T7, T8, T10	TP1	40	TP1L4	10386117
Tree Panel 2	Maple, Oak, Elm, Cottonwood, Pecan T1, T7, T8, T14, T22	TP2	40	TP2L4	10386119
Tree Panel 4	Oak, Elm, Sycamore, Willow, Cottonwood T7, T8, T11, T12, T14	TP4	40	TP4L4	10386122
Tree Panel 6	Maple, Birch, Beech, Oak, Walnut T1, T3, T5, T7, T10	TP6	40	TP6L4	10386126
Tree Panel 7	Olive, Willow, White Pine, Eucalyptus, Acacia, Melaleuca T9, T12, T16, T18, T19, T21	TP7	40	TP7L4	10386128
Tree Panel 9	Alder, Birch, Hazelnut, Oak, Willow T2, T3, T4, T7, T12	TP9	40	TP9L4	10386130

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Weeds					
Whole allergens					
Baccharis halimifolia	Baccharis halimifolia	W67	20	W67L2	10386159
Careless Weed	Amaranthus hybridus	W82	20	W82L2	10386165
Cocklebur	Xanthium commune	W13	20	W13L2	10386134
Common Ragweed	Ambrosia artemisiifolia	W1	40	W1L4	10386143
Common Sagebrush	Artemisia tridentata	W43	20	W43L2	10386155
Dandelion	Taraxacum officinale	W8	20	W8L2	10386166
Dog Fennel	Eupatorium capillifolium	W46	20	W46L2	10386156
English Plantain	Plantago lanceolata	W9	40	W9L4	10386168
False Ragweed	Ambrosia acanthicarpa	W4	20	W4L2	10386157
Firebush	Kochia scoparia	W17	20	W17L2	10386138
Giant Ragweed	Ambrosia trifida	W3	20	W3L2	10386154
Goldenrod	Solidago spp.	W12	20	W12L2	10386133
Lamb's Quarters	Chenopodium album	W10	20	W10L2	10386131
Mugwort	Artemisia vulgaris	W6	40	W6L4	10386162
Nettle	Urtica dioica	W20	20	W20L2	10386146
Ox-Eye Daisy	Chrysanthemum leucanthemum	W7	20	W7L2	10386164
Parietaria judaica	Parietaria judaica	W21	40	W21L4	10386148
Parietaria officinalis	Parietaria officinalis	W19	40	W19L4	10386141
Rabbit Bush	Ambrosia deltoidea	W36	20	W36L2	10386152
Rough Marsh Elder	Iva annua	W16	20	W16L2	10386137
Rough Pigweed	Amaranthus retroflexus	W14	20	W14L2	10386135
Russian Thistle	Salsola kali	W11	20	W11L2	10386132
Saltbush	Atriplex wrightii	W37	20	W37L2	10386153
Scale	Atriplex lentiformis	W15	20	W15L2	10386136
Sheep Sorrel	Rumex acetosella	W18	20	W18L2	10386139
Western Ragweed	Ambrosia psilostachya	W2	20	W2L2	10386151
Wingscale	Atriplex canescens	W75	20	W75L2	10386163
Wormwood	Artemisia annua	W5	20	W5L2	10386158

Allergens (cont.)

Name		Code	Size	Catalog No.	SMN
Weeds (cont.)					
Allergen components					
nArt v 1 – Artemisia vulgaris	Mugwort	A753	20	A753L2	10370468
Mixed Allergen Panels					
Weed Panel 1	Common Ragweed, Mugwort, English Plantain, Lamb's Quarters, Russian Thistle W1, W6, W9, W10, W11	WP1	40	WP1L4	10386170
Weed Panel 2	Western Ragweed, Mugwort, English Plantain, Lamb's Quarters, Scale W2, W6, W9, W10, W15	WP2	40	WP2L4	10386172
Weed Panel 3	Mugwort, English Plantain, Lamb's Quarters, Goldenrod, Nettle W6, W9, W10, W12, W20	WP3	40	WP3L4	10386174

Component allergens

Component-resolved diagnostics in allergy testing may allow for a more detailed assessment of sensitization by targeting individual allergenic proteins rather than whole extracts. This approach could help distinguish between true allergies and cross-reactivities. As a result, it may support more informed clinical decisions and potentially reduce unnecessary interventions.

Name		Code	Size	Catalog No.	SMN	Allergen family
rMal d 1 – Malus domestica	Apple	A464	20	A464L2	10483381	PR-10
rMal d 4 – Malus domestica	Apple	A796	20	A796L2	10471077	Profilin
nAsp r 1 – Aspergillus restrictus	Aspergillus restrictus	A3050	20	A3050L2	10360573	Ribonuclease mitogillin
nBet v 1 – Betula verrucosa	Birch	A89	20	A89L2	10368597	PR-10
rBet v 2 – Betula verrucosa	Birch	A127	20	A127L2	10484690	Profilin
nFel d 1 – Felis domesticus	Cat	A345	20	A345L2	10360576	Uteroglobin
nFel d 2 – Felis domesticus	Cat	E220	20	E220L2	10370455	Serum albumin
rPru av 1 – Prunus avium	Cherry	A597	20	A597L2	10471072	PR-10
rPru av 3 – Prunus avium	Cherry	A599	20	A599L2	10471074	Non-specific lipid transfer protein 1
rPru av 4 – Prunus avium	Cherry	A600	20	A600L2	10471075	Profilin
nCan f 1 – Canis familiaris	Dog	A174	20	A174L2	10360570	Lipocalin
nCan f 3 – Canis familiaris	Dog	E221	20	E221L2	10370456	Serum albumin
nDer f 1 – Dermatophagoides farinae	House dust mite	A295	20	A295L2	10360571	Papain-like cysteine protease
nDer f 2 – Dermatophagoides farinae	House dust mite	A302	20	A302L2	10360572	Group 2 mite allergen
nDer p 1 – Dermatophagoides pteronyssinus	House dust mite	A310	20	A310L2	10360574	Papain-like cysteine protease
nDer p 2 – Dermatophagoides pteronyssinus	House dust mite	A316	20	A316L2	10360575	Group 2 mite allergen

Component allergens (cont.)

Name		Code	Size	Catalog No.	SMN	Allergen family
Alpha Lactalbumin	Milk; Bos d 4; Bos taurus	F76	40	F76L4	10385849	Glycoside hydrolase family 22
Beta Lactoglobulin	Milk; Bos d 5; Bos taurus	F77	40	F77L4	10385851	Lipocalin
Casein	Milk; Bos d 8; Bos taurus	F78	40	F78L4	10385853	Alpha-beta casein / Kappa-casein
nArt v 1 – Artemisia vulgaris	Mugwort	A753	20	A753L2	10370468	Plant defensin
nOle e 1 – Olea europea	Olive	A482	20	A482L2	10370467	Ole e 1 family
nPru p 3 – Prunus persica	Peach	A603	20	A603L2	10368596	Non-specific lipid transfer protein 1
nAra h 1 – Arachis hypogaea	Peanut	F422	20	F422L2	11643846*	7S globulins (vicilins)
rAra h 2 – Arachis hypogaea	Peanut	F423	20	F423L2	11643681*	2S albumins
nAra h 3 – Arachis hypogaea	Peanut	F424	20	F424L2	11643847*	11S globulins (legumins)
nAra h 6 – Arachis hypogaea	Peanut	F447	20	F447L2	11643848*	2S albumins
rAra h 8 – Arachis hypogaea	Peanut	F352	20	F352L2	11643849*	PR-10
rAra h 9 – Arachis hypogaea	Peanut	F427	20	F427L2	11643850*	Non-specific lipid transfer protein 1
nPen m 1 – Penaeus monodon	Tiger shrimp	F351	20	F351L2	10385807	Tropomyosin

*This product is under development and not commercially available. Its future availability cannot be ensured.

Mixed allergen panels

IMMULITE 3gAllergy Panels offer a convenient and efficient approach to screening for allergic sensitizations by testing for IgE antibodies against groups of common allergens. Each panel includes a curated selection of regionally or clinically relevant allergens–such as pollens, molds, animal dander, or foods–chosen to reflect typical exposure patterns. These panels are particularly useful as an initial step in identifying atopic individuals and guiding further, more targeted diagnostic testing.

Panel	Code	Size	Catalog No.	SMN
Animal Panel 1	**EP1**	**40**	**EP1L4**	**10385677**
Cat Dander-Epithelium	E1			
Horse Dander	E3			
Cow Dander	E4			
Dog Dander	E5			
Dust Panel 1	**HP1**	**40**	**HP1L4**	**10385948**
Dermatophagoides pteronyssinus	D1			
Dermatophagoides farinae	D2			
House Dust (Greer)	H1			
Cockroach	I6			
Food Panel 1	**FP1**	**40**	**FP1L4**	**10385882**
Peanut	F13			
Hazelnut	F17			
Brazil Nut	F18			
Almond	F20			
Coconut	F36			
Food Panel 2	**FP2**	**40**	**FP2L4**	**10385889**
Codfish	F3			
Shrimp	F24			
Blue Mussel	F37			
Tuna	F40			
Salmon	F41			
Food Panel 3	**FP3**	**40**	**FP3L4**	**10385891**
Wheat	F4			
Oat	F7			
Corn	F8			
Sesame Seed	F10			
Buckwheat	F11			

Panel	Code	Size	Catalog No.	SMN
Food Panel 5	**FP5**	**40**	**FP5L4**	**10385897**
Egg White	F1			
Milk	F2			
Codfish	F3			
Wheat	F4			
Peanut	F13			
Soybean	F14			
Food Panel 6	**FP6**	**40**	**FP6L4**	**10385899**
Wheat	F4			
Rice	F9			
Sesame Seed	F10			
Buckwheat	F11			
Soybean	F14			
Food Panel 7	**FP7**	**40**	**FP7L4**	**10385903**
Egg White	F1			
Milk	F2			
Wheat	F4			
Rice	F9			
Peanut	F13			
Soybean	F14			

Mixed allergen panels (cont.)

Panel	Code	Size	Catalog No.	SMN
Grass Panel 1	**GP1**	**40**	**GP1L4**	**10385932**
Orchard Grass	G3			
Meadow Fescue	G4			
Perennial Rye Grass	G5			
Timothy Grass	G6			
June Grass (Kentucky Blue)	G8			
Grass Panel 2	**GP2**	**40**	**GP2L4**	**10385934**
Bermuda Grass	G2			
Perennial Rye Grass	G5			
Timothy Grass	G6			
June Grass (Kentucky Blue)	G8			
Johnson Grass	G10			
Bahia Grass	G17			
Grass Panel 3	**GP3**	**40**	**GP3L4**	**10385936**
Sweet Vernal Grass	G1			
Perennial Rye Grass	G5			
Timothy Grass	G6			
Cultivated Rye Grass	G12			
Velvet Grass	G13			
Grass Panel 4	**GP4**	**40**	**GP4L4**	**10385938**
Sweet Vernal Grass	G1			
Perennial Rye Grass	G5			
Common Reed Grass	G7			
Cultivated Rye Grass	G12			
Velvet Grass	G13			

Panel	Code	Size	Catalog No.	SMN
Mold Panel 1	**MP1**	**40**	**MP1L4**	**10386048**
Penicillium notatum	M1			
Cladosporium herbarum	M2			
Aspergillus fumigatus	M3			
Candida albicans	M5			
Alternaria tenuis	M6			
Tree Panel 1	**TP1**	**40**	**TP1L4**	**10386117**
Maple	T1			
Birch	T3			
Oak	T7			
Elm	T8			
Walnut	T10			
Tree Panel 2	**TP2**	**40**	**TP2L4**	**10386119**
Maple	T1			
Oak	T7			
Elm	T8			
Cottonwood	T14			
Pecan	T22			
Tree Panel 4	**TP4**	**40**	**TP4L4**	**10386122**
Oak	T7			
Elm	T8			
Sycamore	T11			
Willow	T12			
Cottonwood	T14			
Tree Panel 6	**TP6**	**40**	**TP6L4**	**10386126**
Maple	T1			
Birch	T3			
Beech	T5			
Oak	T7			
Walnut	T10			

Mixed allergen panels (cont.)

Panel	Code	Size	Catalog No.	SMN
Tree Panel 7	**TP7**	**40**	**TP7L4**	**10386128**
Olive	T9			
Willow	T12			
White Pine	T16			
Eucalyptus	T18			
Acacia	T19			
Melaleuca	T21			
Tree Panel 9	**TP9**	**40**	**TP9L4**	**10386130**
Alder	T2			
Birch	T3			
Hazelnut	T4			
Oak	T7			
Willow	T12			
Weed Panel 1	**WP1**	**40**	**WP1L4**	**10386170**
Common Ragweed	W1			
Mugwort	W6			
English Plantain	W9			
Lamb's Quarters	W10			
Russian Thistle	W11			
Weed Panel 2	**WP2**	**40**	**WP2L4**	**10386172**
Western Ragweed	W2			
Mugwort	W6			
English Plantain	W9			
Lamb's Quarters	W10			
Scale	W15			
Weed Panel 3	**WP3**	**40**	**WP3L4**	**10386174**
Mugwort	W6			
English Plantain	W9			
Lamb's Quarters	W10			
Goldenrod	W12			
Nettle	W20			

Hardware

	Description	Catalog No.	SMN
Septum/septa	A septum can be placed on each specific allergen (or allergy panel/mix) vial while on the instrument. The probe can penetrate the septum.	L2ATS2	10282849
Cap	A cap can be placed on each specific allergen (or allergy panel/mix) vial. This can be done when allergens are removed and stored off-board to minimize evaporation of reagent.	L2ATC	10282837
Allergen wedge	Specific allergen vials are placed into the allergen wedge (six vials per wedge). Each allergen wedge occupies one position on the reagent carousel. Allergen wedges are sold in boxes that contain 33 sequentially numbered wedges.		
	Allergen Wedges, Box 01 - 33	400930-02	10730592
	Allergen Wedges, Box 34 - 66	400930-03	10730593
	Allergen Wedges, Box 67 - 99	400930-04	10730594

Scalable, flexible solutions for enhanced allergy workflows

Today, every laboratory is under intense pressure to do more. To operate more efficiently, process more samples, run more reports, or be more productive with less staff.

IMMULITE 2000 XPi System provides labs with a scalable, flexible allergy testing solution. By automating allergy workflows, labs can enhance sample sorting protocols, reduce sample wait times, and achieve predictable turnaround times.

~80 assays

16 disease states

65 minutes
to allergy test results

~300 allergens

Workflow efficiency that allows you to run with fewer resources.

Flexible, expandable automation solutions —or connected to total lab automation—providing a customized solution that best fits each lab's unique needs and space requirements.

Reduce false positives. 3gAllergy assays minimize the likelihood of false-positive allergen results caused by cross-reactive carbohydrate determinants.[14]

IMMULITE 2000 XPi System

Providing multiple tests on a single, easy-to-use analyzer, the IMMULITE 2000 XPi Immunoassay System makes it simple to adjust to changes in demand and scale capabilities without disrupting day-to-day operations.

- Gain access to an extensive menu of ~300 allergens.
- Process up to 200 tests per hour in batch or random-access mode.
- 3gAllergy technology reduces need for additional testing and the risk of false-positive allergen results.[14]

VersaCell X3 Solution

The VersaCell X3 Solution offers the flexibility that labs need to automate high-volume allergy testing with solutions that can be customized to the specific needs of each lab. The flexible, modular solution can serve as a robust system for optimized sample management, connecting multiple IMMULITE 2000 XPi Systems or connecting to total lab automation.

- Connect as many as three IMMULITE 2000 XPi Systems in a self-contained workcell.
- Flexible configurations support diverse layouts and space constraints.
- Seamless connectivity to Aptio Automation and FlexLab™ X.

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Published by Siemens Healthcare Diagnostics Inc. · LD-26-NAM-7998 · QR700034671 · 02.2026 ·