

**SAMPLE INFORMATION**

Sample ID: 11111111  
 Sampling date: 05.03.2017  
 Approval status: Approved  
 Print date: 05.03.2017  
 Calibration curve:

**PATIENT INFORMATION**

Patient ID:  
 Name:  
 Birth date: 00/00/0000 Age: 00  
 ID/MR#: Gender: F

**ORDERING PHYSICIAN INFORMATION**

Ordering physician:  
 Address: London Allergy and Immunology Centre LTD.

**1. Summary of positive IgE results**

**Mainly species-specific aeroallergen components**

**Grass pollen**

Bermuda grass	nCyn d 1	Grass group 1	2,1 ISU-E	
Timothy grass	rPhl p 1	Grass group 1	5,5 ISU-E	
	rPhl p 2	Grass group 2	0,5 ISU-E	
	nPhl p 4	Berberine bridge enzyme	1,7 ISU-E	
	rPhl p 5	Grass group 5	4,6 ISU-E	

**Tree pollen**

Birch	rBet v 1	PR-10 protein	13 ISU-E	
Cypress	nCup a 1	Pectate lyase	1,3 ISU-E	
Olive pollen	rOle e 1	Common olive group 5	2,5 ISU-E	

**Cross-reactive components**

**PR-10 protein**

Birch	rBet v 1	PR-10 protein	13 ISU-E	
Alder	rAln g 1	PR-10 protein	1,3 ISU-E	
Hazel pollen	rCor a 1.0101	PR-10 protein	0,6 ISU-E	
Hazelnut	rCor a 1.0401	PR-10 protein	2,6 ISU-E	
Apple	rMal d 1	PR-10 protein	3,9 ISU-E	
Peach	rPru p 1	PR-10 protein	1,3 ISU-E	

**CCD**

CCD	nMUXF3	CCD	0,5 ISU-E	
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**ISAC Standardized Units (ISU-E)**

**Level**

< 0.3	Undetectable	
0.3 - 0.9	Low	
1 - 14.9	Moderate / High	
≥ 15	Very High	

SAMPLE INFORMATION		PATIENT INFORMATION	
Sample ID:	1111111	Patient ID:	
Sampling date:	05.03.2017	Name:	P
Approval status:	Approved	Birth date:	00/00/0000
Print date:	05.03.2017	ID/MR#:	
Calibration curve:		Age:	00
		Gender:	F

ORDERING PHYSICIAN INFORMATION	
Ordering physician:	
Address:	London Allergy and Immunology Centre LTD.

## 2. IgE results sorted by protein group






### Mainly species-specific food components

Egg white	nGal d 1	Ovomucoid	<0.3 ISU-E
	nGal d 2	Ovalbumin	<0.3 ISU-E
	nGal d 3	Conalbumin/Ovotransferrin	<0.3 ISU-E
Egg yolk/chicken meat	nGal d 5	Livetin/Serum albumin	<0.3 ISU-E
Cow's milk	nBos d 4	Alpha-lactalbumin	<0.3 ISU-E
	nBos d 5	Beta-lactoglobulin	<0.3 ISU-E
	nBos d 8	Casein	<0.3 ISU-E
	nBos d lactoferrin	Transferrin	<0.3 ISU-E
Cod	rGad c 1	Parvalbumin	<0.3 ISU-E
Shrimp	nPen m 2	Arginine kinase	<0.3 ISU-E
	nPen m 4	Sarcoplasmic calcium binding protein	<0.3 ISU-E
Cashew nut	rAna o 2	Storage protein, 11S globulin	<0.3 ISU-E
Brazil nut	rBer e 1	Storage protein, 2S albumin	<0.3 ISU-E
Hazelnut	nCor a 9	Storage protein, 11S globulin	<0.3 ISU-E
Walnut	rJug r 1	Storage protein, 2S albumin	<0.3 ISU-E
	nJug r 2	Storage protein, 7S globulin	<0.3 ISU-E
Sesame seed	nSes i 1	Storage protein, 2S albumin	<0.3 ISU-E
Peanut	rAra h 1	Storage protein, 7S globulin	<0.3 ISU-E
	rAra h 2	Storage protein, Conglutin	<0.3 ISU-E
	rAra h 3	Storage protein, 11S globulin	<0.3 ISU-E
	nAra h 6	Storage protein, 2S albumin	<0.3 ISU-E
Soybean	nGly m 5	Storage protein, Beta-conglycinin	<0.3 ISU-E
	nGly m 6	Storage protein, Glycinin	<0.3 ISU-E
Buckwheat	nFag e 2	Storage protein, 2S albumin	<0.3 ISU-E
Wheat	rTri a 19.0101	Omega-5 gliadin	<0.3 ISU-E
	nTri a aA_TI	Alpha-amylase / Trypsin inhibitor	<0.3 ISU-E
Kiwi	nAct d 1	Cysteine protease	<0.3 ISU-E
	nAct d 5	Kiwellin	<0.3 ISU-E




Parvalbumins are major allergens in fish and markers for cross-reactivity among different species of fish.

## Mainly species-specific aeroallergen components

### Grass pollen

Bermuda grass	nCyn d 1	Grass group 1	2,1 ISU-E	
Timothy grass	rPhl p 1	Grass group 1	5,5 ISU-E	
	rPhl p 2	Grass group 2	0,5 ISU-E	
	nPhl p 4	Berberine bridge enzyme	1,7 ISU-E	
	rPhl p 5	Grass group 5	4,6 ISU-E	
	rPhl p 6	Grass group 6	<0.3 ISU-E	
	rPhl p 11	Ole e 1-related protein	<0.3 ISU-E	

### Tree pollen

Birch	rBet v 1	PR-10 protein	13 ISU-E	
Japanese cedar	nCry j 1	Pectate lyase	<0.3 ISU-E	
Cypress	nCup a 1	Pectate lyase	1,3 ISU-E	
Olive pollen	rOle e 1	Common olive group 5	2,5 ISU-E	
	rOle e 9	Beta-1,3-glucanase	<0.3 ISU-E	
Plane tree	rPla a 1	Putative invertase inhibitor	<0.3 ISU-E	
	nPla a 2	Polygalacturonase	<0.3 ISU-E	

Ole e 1 is also a marker for ash sensitization.

### Weed pollen

Ragweed	nAmb a 1	Pectate lyase	<0.3 ISU-E
Mugwort	nArt v 1	Defensin	<0.3 ISU-E
Goosefoot	rChe a 1	Ole e 1-related protein	<0.3 ISU-E
Wall pelitory	rPar j 2	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Plantain	rPla l 1	Ole e 1-related protein	<0.3 ISU-E
Saltwort	nSal k 1	Pectin methylesterase	<0.3 ISU-E

### Animal

Dog	rCan f 1	Lipocalin	<0.3 ISU-E
	rCan f 2	Lipocalin	<0.3 ISU-E
	rCan f 5	Arginine Esterase	<0.3 ISU-E
Horse	rEqu c 1	Lipocalin	<0.3 ISU-E
Cat	rFel d 1	Uteroglobin	<0.3 ISU-E
	rFel d 4	Lipocalin	<0.3 ISU-E
Mouse	nMus m 1	Lipocalin	<0.3 ISU-E

### Mold

Alternaria	rAlt a 1	Acidic glycoprotein	<0.3 ISU-E
	rAlt a 6	Enolase	<0.3 ISU-E
Aspergillus	rAsp f 1	Mitogillin family	<0.3 ISU-E
	rAsp f 3	Peroxisomal protein	<0.3 ISU-E
	rAsp f 6	Mn superoxide dismutase	<0.3 ISU-E
Cladosporium	rCla h 8	Mannitol dehydrogenase	<0.3 ISU-E

### Mite

B. tropicalis (HDM)	rBlo t 5	Mite group 5	<0.3 ISU-E
D. farinae (HDM)	nDer f 1	Cysteine protease	<0.3 ISU-E
	rDer f 2	NPC2 family	<0.3 ISU-E
D. pteronyssinus (HDM)	nDer p 1	Cysteine protease	<0.3 ISU-E
	rDer p 2	NPC2 family	<0.3 ISU-E
L. destructor (storage mite)	rLep d 2	NPC2 family	<0.3 ISU-E

### Cockroach

Cockroach	rBla g 1	Cockroach group 1	<0.3 ISU-E
	rBla g 2	Aspartic protease	<0.3 ISU-E

## Mainly species-specific aeroallergen components

### Cockroach

Cockroach	rBla g 5	Glutathione S-transferase	<0.3 ISU-E
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## Other mainly species-specific components

### Venom

Honey bee venom	rApi m 1	Phospholipase A2	<0.3 ISU-E
	nApi m 4	Melittin	<0.3 ISU-E
Paper wasp	rPol d 5	Antigen 5	<0.3 ISU-E
Common wasp	rVes v 5	Antigen 5	<0.3 ISU-E

ImmunoCAP ISAC should not be used to confirm suspicion of venom allergy. Instead ImmunoCAP sIgE components or complete allergens should be used. When ImmunoCAP ISAC reveals IgE abs to venoms further testing for venom allergy is recommended. The venom components on ImmunoCAP ISAC are CCD free.

### Parasite

Anisakis	rAni s 1	Serine protease inhibitor	<0.3 ISU-E
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### Latex

Latex	rHev b 1	Rubber elongation factor	<0.3 ISU-E
	rHev b 3	Small rubber particle protein	<0.3 ISU-E
	rHev b 5	Acidic protein	<0.3 ISU-E
	rHev b 6.01	Prohevein	<0.3 ISU-E

## Cross-reactive components

### Serum albumin

Cow's milk/meat	nBos d 6	Serum albumin	<0.3 ISU-E
Dog	nCan f 3	Serum albumin	<0.3 ISU-E
Horse	nEqu c 3	Serum albumin	<0.3 ISU-E
Cat	nFel d 2	Serum albumin	<0.3 ISU-E

An abundant protein present in different animal tissues, e.g blood, milk, meat (e.g. beef) and egg. Cross-reactions between albumins from different animal species are well known, for example between cat and dog or cat and pork.

### Tropomyosin

Anisakis	rAni s 3	Tropomyosin	<0.3 ISU-E
Cockroach	nBla g 7	Tropomyosin	<0.3 ISU-E
D. pteronyssinus (HDM)	rDer p 10	Tropomyosin	<0.3 ISU-E
Shrimp	nPen m 1	Tropomyosin	<0.3 ISU-E

An actin-binding protein in muscle fibers. A marker for cross-reactivity between crustaceans, mites and cockroaches.







### Lipid transfer protein (nsLTP)

Peanut	rAra h 9	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Hazelnut	rCor a 8	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Walnut	nJug r 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Peach	rPru p 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Wheat	rTri a 14	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Mugwort	nArt v 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Olive pollen	nOle e 7	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Plane tree	rPla a 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E

Sensitization to LTPs is often associated with allergic reactions to fruit and vegetables in regions where peaches and closely related fruits are cultivated and is often associated with systemic and more severe reactions in addition to OAS. LTP proteins are stable to heat and digestion causing reactions also to cooked foods.

## Cross-reactive components

### PR-10 protein

Birch	rBet v 1	PR-10 protein	13 ISU-E	
Alder	rAln g 1	PR-10 protein	1,3 ISU-E	
Hazel pollen	rCor a 1.0101	PR-10 protein	0,6 ISU-E	
Hazelnut	rCor a 1.0401	PR-10 protein	2,6 ISU-E	
Apple	rMal d 1	PR-10 protein	3,9 ISU-E	
Peach	rPru p 1	PR-10 protein	1,3 ISU-E	
Soybean	rGly m 4	PR-10 protein	<0.3 ISU-E	
Peanut	rAra h 8	PR-10 protein	<0.3 ISU-E	
Kiwi	rAct d 8	PR-10 protein	<0.3 ISU-E	
Celery	rApi g 1	PR-10 protein	<0.3 ISU-E	

Birch or related Fagales tree pollens are often the primary sensitizer to PR-10 proteins in areas with high exposure to these pollens. The presence of PR-10 proteins in many plant foods can cause allergic reactions to fruits, nuts and vegetables due to cross-reactivity, and is often associated with local symptoms such as oral allergy syndrom (OAS). Many of these proteins are heat labile and cooked foods are often tolerated.

### Thaumatine-like protein

Kiwi	nAct d 2	Thaumatococcus-like protein	<0.3 ISU-E
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Act d 2 may give rise to cross-reactivity with other thaumatin-like proteins. Thaumatococcus-like proteins have been found in pollen, fruits (e.g. apple and grape), fungi (Alternaria), mites and insects.

### Profilin

Birch	rBet v 2	Profilin	<0.3 ISU-E
Latex	rHev b 8	Profilin	<0.3 ISU-E
Annual mercury	rMer a 1	Profilin	<0.3 ISU-E
Timothy grass	rPhl p 12	Profilin	<0.3 ISU-E

Profilins show great homology and cross-reactivity even between distantly related plant species. Seldom associated with clinical symptoms but may cause demonstrable or even severe reactions in a minority of patients allergic to e.g. citrus fruits, melon, banana, litchi and tomato.

### CCD

CCD	nMUXF3	CCD	0,5 ISU-E	
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Cross-reactive Carbohydrate Determinants (CCD) are rarely associated with allergic reactions, but may produce positive in-vitro test results to CCD-containing allergens from pollen, plant food, insects and venoms.

### Polcalcin (Calcium binding 2-EF-hand protein)

Birch	rBet v 4	Polcalcin	<0.3 ISU-E
Timothy grass	rPhl p 7	Polcalcin	<0.3 ISU-E

Markers for cross-reactivity between pollen.

### ISAC Standardized Units (ISU-E)

< 0.3	Undetectable	
0.3 - 0.9	Low	
1 - 14.9	Moderate / High	
≥ 15	Very High	

SAMPLE INFORMATION		PATIENT INFORMATION			
Sample ID:	111111111	Patient ID:			
Sampling date:	05.03.2017	Name:			
Approval status:	Approved	Birth date:	00/00/0000	Age:	00
Print date:	05.03.2017	ID/MR#:		Gender:	F
Calibration curve:					



ORDERING PHYSICIAN INFORMATION	
Ordering physician:	
Address:	London Allergy and Immunology Centre LTD.

### 3. IgE results sorted by allergen source











#### Food allergens

Egg white	nGal d 1	Ovomucoid	<0.3 ISU-E
	nGal d 2	Ovalbumin	<0.3 ISU-E
	nGal d 3	Conalbumin/Ovotransferrin	<0.3 ISU-E
Egg yolk/chicken meat	nGal d 5	Livetin/Serum albumin	<0.3 ISU-E
Cow's milk	nBos d 4	Alpha-lactalbumin	<0.3 ISU-E
	nBos d 5	Beta-lactoglobulin	<0.3 ISU-E
Cow's milk/meat	nBos d 6	Serum albumin	<0.3 ISU-E
Cow's milk	nBos d 8	Casein	<0.3 ISU-E
	nBos d lactoferrin	Transferrin	<0.3 ISU-E
Cod	rGad c 1	Parvalbumin	<0.3 ISU-E
Shrimp	nPen m 1	Tropomyosin	<0.3 ISU-E
	nPen m 2	Arginine kinase	<0.3 ISU-E
	nPen m 4	Sarcoplasmic calcium binding protein	<0.3 ISU-E
Cashew nut	rAna o 2	Storage protein, 11S globulin	<0.3 ISU-E
Brazil nut	rBer e 1	Storage protein, 2S albumin	<0.3 ISU-E
Hazelnut	rCor a 1.0401	PR-10 protein	2,6 ISU-E
	rCor a 8	Lipid transfer protein (nsLTP)	<0.3 ISU-E
	nCor a 9	Storage protein, 11S globulin	<0.3 ISU-E
Walnut	rJug r 1	Storage protein, 2S albumin	<0.3 ISU-E
	nJug r 2	Storage protein, 7S globulin	<0.3 ISU-E
	nJug r 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Sesame seed	nSes i 1	Storage protein, 2S albumin	<0.3 ISU-E
Peanut	rAra h 1	Storage protein, 7S globulin	<0.3 ISU-E
	rAra h 2	Storage protein, Conglutin	<0.3 ISU-E
	rAra h 3	Storage protein, 11S globulin	<0.3 ISU-E
	nAra h 6	Storage protein, 2S albumin	<0.3 ISU-E
	rAra h 8	PR-10 protein	<0.3 ISU-E
	rAra h 9	Lipid transfer protein (nsLTP)	<0.3 ISU-E
Soybean	rGly m 4	PR-10 protein	<0.3 ISU-E
	nGly m 5	Storage protein, Beta-conglycinin	<0.3 ISU-E
	nGly m 6	Storage protein, Glycinin	<0.3 ISU-E



Buckwheat	nFag e 2	Storage protein, 2S albumin	<0.3 ISU-E	
Wheat	rTri a 14	Lipid transfer protein (nsLTP)	<0.3 ISU-E	
	rTri a 19.0101	Omega-5 gliadin	<0.3 ISU-E	
Kiwi	nTri a aA_TI	Alpha-amylase / Trypsin inhibitor	<0.3 ISU-E	
	nAct d 1	Cysteine protease	<0.3 ISU-E	
	nAct d 2	Thaumatococcus-like protein	<0.3 ISU-E	
	nAct d 5	Kiwellin	<0.3 ISU-E	
Apple	rAct d 8	PR-10 protein	<0.3 ISU-E	
	rMal d 1	PR-10 protein	3,9 ISU-E	
Peach	rPru p 1	PR-10 protein	1,3 ISU-E	
	rPru p 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E	
Celery	rApi g 1	PR-10 protein	<0.3 ISU-E	


## Aeroallergens

Bermuda grass	nCyn d 1	Grass group 1	2,1 ISU-E	
Timothy grass	rPhl p 1	Grass group 1	5,5 ISU-E	
	rPhl p 2	Grass group 2	0,5 ISU-E	
	nPhl p 4	Berberine bridge enzyme	1,7 ISU-E	
	rPhl p 5	Grass group 5	4,6 ISU-E	
	rPhl p 6	Grass group 6	<0.3 ISU-E	
	rPhl p 7	Polcalcin	<0.3 ISU-E	
	rPhl p 11	Ole e 1-related protein	<0.3 ISU-E	
	rPhl p 12	Profilin	<0.3 ISU-E	
Alder	rAln g 1	PR-10 protein	1,3 ISU-E	
Birch	rBet v 1	PR-10 protein	13 ISU-E	
	rBet v 2	Profilin	<0.3 ISU-E	
	rBet v 4	Polcalcin	<0.3 ISU-E	
Hazel pollen	rCor a 1.0101	PR-10 protein	0,6 ISU-E	
Japanese cedar	nCry j 1	Pectate lyase	<0.3 ISU-E	
Cypress	nCup a 1	Pectate lyase	1,3 ISU-E	
Olive pollen	rOle e 1	Common olive group 5	2,5 ISU-E	
	nOle e 7	Lipid transfer protein (nsLTP)	<0.3 ISU-E	
	rOle e 9	Beta-1,3-glucanase	<0.3 ISU-E	
Plane tree	rPla a 1	Putative invertase inhibitor	<0.3 ISU-E	
	nPla a 2	Polygalacturonase	<0.3 ISU-E	
	rPla a 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E	
Ragweed	nAmb a 1	Pectate lyase	<0.3 ISU-E	
Mugwort	nArt v 1	Defensin	<0.3 ISU-E	
	nArt v 3	Lipid transfer protein (nsLTP)	<0.3 ISU-E	
Goosefoot	rChe a 1	Ole e 1-related protein	<0.3 ISU-E	
Annual mercury	rMer a 1	Profilin	<0.3 ISU-E	
Wall pelitory	rPar j 2	Lipid transfer protein (nsLTP)	<0.3 ISU-E	
Plantain	rPla l 1	Ole e 1-related protein	<0.3 ISU-E	
Saltwort	nSal k 1	Pectin methylesterase	<0.3 ISU-E	
Dog	rCan f 1	Lipocalin	<0.3 ISU-E	
	rCan f 2	Lipocalin	<0.3 ISU-E	
	nCan f 3	Serum albumin	<0.3 ISU-E	
	rCan f 5	Arginine Esterase	<0.3 ISU-E	
Horse	rEqu c 1	Lipocalin	<0.3 ISU-E	
	nEqu c 3	Serum albumin	<0.3 ISU-E	
Cat	rFel d 1	Uteroglobin	<0.3 ISU-E	
	nFel d 2	Serum albumin	<0.3 ISU-E	



## Aeroallergens

Cat	rFel d 4	Lipocalin	<0.3 ISU-E
Mouse	nMus m 1	Lipocalin	<0.3 ISU-E
Alternaria	rAlt a 1	Acidic glycoprotein	<0.3 ISU-E
	rAlt a 6	Enolase	<0.3 ISU-E
Aspergillus	rAsp f 1	Mitogillin family	<0.3 ISU-E
	rAsp f 3	Peroxisomal protein	<0.3 ISU-E
	rAsp f 6	Mn superoxide dismutase	<0.3 ISU-E
Cladosporium	rCla h 8	Mannitol dehydrogenase	<0.3 ISU-E
B. tropicalis (HDM)	rBlo t 5	Mite group 5	<0.3 ISU-E
D. farinae (HDM)	nDer f 1	Cysteine protease	<0.3 ISU-E
	rDer f 2	NPC2 family	<0.3 ISU-E
D. pteronyssinus (HDM)	nDer p 1	Cysteine protease	<0.3 ISU-E
	rDer p 2	NPC2 family	<0.3 ISU-E
	rDer p 3	Tropomyosin	<0.3 ISU-E
L. destructor (storage mite)	rLep d 2	NPC2 family	<0.3 ISU-E
Cockroach	rBla g 1	Cockroach group 1	<0.3 ISU-E
	rBla g 2	Aspartic protease	<0.3 ISU-E
	rBla g 5	Glutathione S-transferase	<0.3 ISU-E
	nBla g 7	Tropomyosin	<0.3 ISU-E

## Other

Honey bee venom	rApi m 1	Phospholipase A2	<0.3 ISU-E
	nApi m 4	Melittin	<0.3 ISU-E
Paper wasp	rPol d 5	Antigen 5	<0.3 ISU-E
Common wasp	rVes v 5	Antigen 5	<0.3 ISU-E
Anisakis	rAni s 1	Serine protease inhibitor	<0.3 ISU-E
	rAni s 3	Tropomyosin	<0.3 ISU-E
Latex	rHev b 1	Rubber elongation factor	<0.3 ISU-E
	rHev b 3	Small rubber particle protein	<0.3 ISU-E
	rHev b 5	Acidic protein	<0.3 ISU-E
	rHev b 6.01	Prohevein	<0.3 ISU-E
CCD	rHev b 8	Profilin	<0.3 ISU-E
	nMUXF3	CCD	0,5 ISU-E 

### ISAC Standardized Units (ISU-E)

< 0.3	Undetectable	
0.3 - 0.9	Low	
1 - 14.9	Moderate / High	
≥ 15	Very High	