

The Stables New Lodge Drift Road Winkfield Windsor Berkshire SL4 4RR

(
PATIENT ID:	REFERRING PHYSICIAN:
O VHA	Viva Health Laboratories
PATIENT NAME:	TESTED BY:
ALEX Full Panel	BIO-DIAGNOSTICS LTD,
DATE OF BIRTH:	UPTON INDUSTRIAL ESTATE,
	RECTORY ROAD, UPTON UPON SEVERN,
SAMPLE CODE:	WORCESTERSHIRE
▲ VH_ALEX	
QR-CODE:	WR8 0LX
02AOW051	The internal QC (Plausibility check for GD) was within
ANALYZED ON:	acceptance range.
13/03/2023	
TESTED ALLERGENS:	
295	
TEST METHOD:	
بع ALEX ²	

Lab report: Summary on detectable sensitisations

POLLEN	MICROORGANISMS		
Grass Pollen	Fungal Spores & Yeast		
Tree Pollen	ANIMAL-DERIVED FO	OD	
Weed Pollen	Milk		
MITES	Egg		
House Dust Mites & Storage Mites	Fish & Seafood		
PLANT-BASED FOOD	Meat		
Legumes	EPITHELIAL TISSUES OF ANIMALS		
Grains	Pets		
Spices	Farm Animals		
Fruits	OTHERS		
Vegetables	Latex		
Nuts & Seeds	Ficus		
INSECTS & VENOMS	CCD		
Ant, Bee, Wasp	Parasite		
Cockroach			



< 0.3 kUA/L	0.3 - 1 kUA/L	1 - 5 kUA/L	5 - 15 kUA/L	> 15 kUA/L
Negative or uncertain	Low IgE level	Moderate IgE level	High IgE level	Very high IgE level



Name	E/M	Allergen	Function	kU _A /L
POLLEN				
Grass Pollen				
Bermuda grass		Cyn d		≤ 0.10
	۲	Cyn d 1	Beta-Expansin	≤ 0.10
Perennial Ryegrass	۲	Lol p 1	Beta-Expansin	≤ 0.10
Bahia grass		Pas n		≤ 0.10
Fimothy grass	۲	Phl p 1	Beta-Expansin	≤ 0.10
	۲	Phl p 2	Expansin	0.26
	۲	Phl p 5.0101	Grass Group 5/6	≤ 0.10
	۲	Phl p 6	Grass Group 5/6	≤ 0.10
	۲	Phl p 7	Polcalcin	≤ 0.10
	۲	Phl p 12	Profilin	≤ 0.10
Common reed		Phr c		0.11
Cultivated rye, Pollen		Sec c_pollen		≤ 0.10
Tree Pollen				
Acacia		Aca m		0.15
Tree of Heaven		Ail a		≤ 0.10
Alder	۲	Aln g 1	PR-10	0.16
	۲	Aln g 4	Polcalcin	≤ 0.10
Silver birch	۲	Bet v 1	PR-10	≤ 0.10
	۲	Bet v 2	Profilin	≤ 0.10
	۲	Bet v 6	Isoflavon Reductase	0.24
				10.10
Paper mulberry		Bro pa		≤ 0.10
		Bro pa Cor a_pollen		≤ 0.10
Paper mulberry Hazel pollen			PR-10	1

	Cor a 1.0103	PR-10	20.10
Sugi	Cry j 1	Pectate Lyase	≤ 0.10
Cypress	• Cup a 1	Pectate Lyase	≤ 0.10
	Cup s		≤ 0.10
Beech	• Fag s 1	PR-10	≤ 0.10
Ash	Fra e		≤ 0.10
	• Fra e 1	Ole e 1-Family	≤ 0.10
Walnut pollen	Jug r_pollen		0.10
Mountain cedar	Jun a		≤ 0.10
Mulberry	Mor r		≤ 0.10
Olive	• Ole e 1	Ole e 1-Family	≤ 0.10



Name	E/M	Allergen	Function		kU _A /L
	۲	Ole e 9	1,3 β Glucanase	≤ 0.10	
Date palm	۲	Pho d 2	Profilin	≤ 0.10	
London plane tree	۲	Pla a 1	Plant Invertase	≤ 0.10	
	۲	Pla a 2	Polygalacturonase	≤ 0.10	
	۲	Pla a 3	nsLTP	≤ 0.10	
Cottonwood		Pop n		≤ 0.10	
Elm		Ulm c		≤ 0.10	

Weed Pollen

Common Pigweed		Ama r		≤ 0.10
Ragweed		Amb a		0.15
	۲	Amb a 1	Pectate Lyase	0.35
	۲	Amb a 4	Plant Defensin	≤ 0.10
Mugwort		Art v		≤ 0.10
	۲	Art v 1	Plant Defensin	0.15
	۲	Art v 3	nsLTP	≤ 0.10
Hemp		Can s		≤ 0.10
	۲	Can s 3	nsLTP	≤ 0.10
Lamb's quarter		Che a		≤ 0.10
	۲	Che a 1	Ole e 1-Family	≤ 0.10
Annual mercury	۲	Mer a 1	Profilin	≤ 0.10
Wall pellitory		Par j		≤ 0.10
	۲	Par j 2	nsLTP	≤ 0.10
Ribwort		Pla I		≤ 0.10
	۲	Pla I 1	Ole e 1-Family	0.16
Russian thistle		Sal k		0.12
	۲	Sal k 1	Pectin Methylesterase	≤ 0.10
Nettle		Urt d		≤ 0.10

MITES House Dust Mite

American house dust mite	Oer f 1	Cysteine protease	42.55
	Oer f 2	NPC2 Family	31.17
European house dust mite	• Der p 1	Cysteine protease	43.37
	Oer p 2	NPC2 Family	29.96
	• Der p 5	unknown	5.15

Name	E/M	Allergen	Function		kU _A /L
	۲	Der p 7	Mites, Group 7	0.21	
	۲	Der p 10	Tropomyosin	≤ 0.10	
	۲	Der p 11	Myosin, heavy chain	≤ 0.10	
	۲	Der p 20	Arginine kinase	≤ 0.10	
	۲	Der p 21	unknown	45.56	
	۲	Der p 23	Peritrophin-like protein domain	45.02	

Storage Mite

Acarus siro	Aca s		4.43
Blomia tropicalis	Blo t 5	Mites, Group 5	5.23
	Blot 10	Tropomyosin	≤ 0.10
	 Blo t 21 	unknown	0.86
Glycyphagus domesticus	Oly d 2	NPC2 Family	29.66
Lepidoglyphus destructor	Eep d 2	NPC2 Family	10.86
Tyrophagus putrescentiae	Tyr p		1.07
	• Tyr p 2	NPC2 Family	8.71

MICROORGANISMS & SPORES

Yeast

Malassezia sympodialis	۲	Mala s 5	unknown	≤ 0.10
	۲	Mala s 6	Cyclophilin	≤ 0.10
	۲	Mala s 11	Mn Superoxid- Dismutase	≤ 0.10
Yeast		Sac c		0.41

Moulds

Alternaria alternata	Alt a 1	Alt a 1-Family	≤ 0.10
	Alt a 6	Enolase	≤ 0.10
Aspergillus fumigatus	Asp f 1	Mitogillin Family	≤ 0.10
	Asp f 3	Peroxysomal Protein	≤ 0.10
	 Asp f 4 	unknown	≤ 0.10
	 Asp f 6 	Mn Superoxid- Dismutase	≤ 0.10
Cladosporium herbarum	Cla h		0.19
	Ola h 8	Short Chain Dehydrogenase	≤ 0.10
Penicilium chrysogenum	Pen ch		0.26

Name

Allergen

E/M

Function

kU_A/L

PLANT FOOD

Legumes

Peanut	۲	Ara h 1	7/8S Globulin	0.26
	۲	Ara h 2	2S Albumin	0.30
	۲	Ara h 3	11S Globulin	≤ 0.10
	۲	Ara h 6	2S Albumin	≤ 0.10
	۲	Ara h 8	PR-10	≤ 0.10
	۲	Ara h 9	nsLTP	≤ 0.10
	۲	Ara h 15	Oleosin	≤ 0.10
Chickpea		Cic a		0.61
Soy	۲	Gly m 4	PR-10	0.23
	۲	Gly m 5	7/8S Globulin	0.17
	۲	Gly m 6	11S Globulin	0.69
	۲	Gly m 8	2S Albumin	1.72
Lentil		Len c		0.16
White bean		Pha v		≤ 0.10
Pea		Pis s		0.14

Cereals

Oat		Ave s		0.66
Quinoa		Che q		≤ 0.10
Common buckwheat		Fag e		0.24
	۲	Fag e 2	2S Albumin	≤ 0.10
Barley		Hor v		0.32
Lupine seed		Lup a		0.15
Rice		Ory s		≤ 0.10
Millet		Pan m		≤ 0.10
Cultivated rye		Sec c_flour		≤ 0.10
Wheat	۲	Tri a aA_TI	Alpha-Amylase Trypsin- Inhibitor	0.14
	۲	Tri a 14	nsLTP	0.18
	۲	Tri a 19	Omega-5-Gliadin	0.11
Spelt		Tri s		0.12
Maize		Zea m		≤ 0.10
	۲	Zea m 14	nsLTP	≤ 0.10

Name	E/M Allergen	Function	kUĄ/L
Spices			
Paprika	Cap a		0.19
Caraway	Cap a		≤ 0.10
Oregano	Ori v		≤ 0.10
Parsley	Pet c		0.14
Anise	Pim a		≤ 0.10
Mustard	Sin		≤ 0.10
	● Sin a 1	2S Albumin	1.36

Fruits

Kiwi	۲	Act d 1	Cysteine protease	≤ 0.10
	۲	Act d 2	TLP	0.39
	۲	Act d 5	Kiwellin	≤ 0.10
	۲	Act d 10	nsLTP	≤ 0.10
Рарауа		Car p		≤ 0.10
Orange		Cit s		≤ 0.10
Melon	۲	Cuc m 2	Profilin	≤ 0.10
Fig		Fic c		0.25
Strawberry	۲	Fra a 1+3	PR-10+LTP	≤ 0.10
Apple	۲	Mal d 1	PR-10	≤ 0.10
	۲	Mal d 2	TLP	≤ 0.10
	۲	Mal d 3	nsLTP	≤ 0.10
Mango		Man i		≤ 0.10
Banana		Mus a		≤ 0.10
Avocado		Pers a		0.15
Cherry		Pru av		≤ 0.10
Peach	۲	Pru p 3	nsLTP	0.16
Pear		Pyr c		≤ 0.10
Blueberry		Vac m		≤ 0.10
Grapes	۲	Vit v 1	nsLTP	≤ 0.10

Vegetables

Onion	All c		0.10
Garlic	All s		0.14
Celery	Api g 1	PR-10	0.14



Name	E/M	Allergen	Function		kU _A /L
	۲	Api g 2	nsLTP	≤ 0.10	
	۲	Api g 6	nsLTP	≤ 0.10	
Carrot		Dau c		0.46	
	۲	Dau c 1	PR-10	0.28	
Potato		Sol t		≤ 0.10	
Tomato		Sola I		≤ 0.10	
	۲	Sola I 6	nsLTP	≤ 0.10	

Nuts

Cashew		Ana o		2.02
	۲	Ana o 2	11S Globulin	≤ 0.10
	۲	Ana o 3	2S Albumin	1.08
Brazil nut		Ber e		0.43
	۲	Ber e 1	2S Albumin	≤ 0.10
Pecan		Car i		14.88
Hazelnut	۲	Cor a 1.0401	PR-10	≤ 0.10
	۲	Cor a 8	nsLTP	≤ 0.10
	۲	Cor a 9	11S Globulin	1.49
	۲	Cor a 11	7/8S Globulin	0.98
	۲	Cor a 14	2S Albumin	14.96
Walnut	۲	Jug r 1	2S Albumin	44.14
	۲	Jug r 2	7/8S Globulin	10.86
	۲	Jug r 3	nsLTP	≤ 0.10
	۲	Jug r 4	11S Globulin	7.45
	۲	Jug r 6	7/8S Globulin	10.65
Macadamia	۲	Mac i 2S Albumin	2S Albumin	≤ 0.10
		Mac inte		0.10
Pistachio	۲	Pis v 1	2S Albumin	0.75
	۲	Pis v 2	11S Globulin subunit	≤ 0.10
	۲	Pis v 3	7/8S Globulin	≤ 0.10
Almond		Pru du		1.50

Seed

Pumpkin seed	Cuc p	≤ 0.10
Sunflower seed	Hel a	0.44
Poppy seed	Pap s	0.25



Name	E/M	Allergen	Function	kUg	/L
	۲	Pap s 2S Albumin	2S Albumin	≤ 0.10	
Sesame		Ses i		1.87	
	۲	Ses i 1	2S Albumin	4.18	
Fenugreek seeds		Tri fo		0.13	

ANIMAL FOOD

Milk

Cow, milk		Bos d_milk		≤ 0.10
	۲	Bos d 4	α-Lactalbumin	≤ 0.10
	۲	Bos d 5	β-Lactoglobulin	0.34
	۲	Bos d 8	Casein	≤ 0.10
Camel		Cam d		≤ 0.10
Goat, milk		Cap h_milk		≤ 0.10
Mare's milk		Equ c_milk		≤ 0.10
Sheep, milk		Ovi a_milk		≤ 0.10

Egg

Egg white	Gal d_white		0.32
Egg yolk	Gal d_yolk		≤ 0.10
Egg white	• Gal d 1	Ovomucoid	≤ 0.10
	• Gal d 2	Ovalbumin	≤ 0.10
	• Gal d 3	Ovotransferrin	≤ 0.10
	Gal d 4	Lysozym C	≤ 0.10
Egg yolk	• Gal d 5	Serum Albumin	0.18

Seafood

Herring worm	۲	Ani s 1	Kunitz Serin Protease Inhibitor	0.10
	۲	Ani s 3	Tropomyosin	≤ 0.10
Crab		Chi spp.		≤ 0.10
Herring		Clu h		≤ 0.10
	۲	Clu h 1	β-Parvalbumin	≤ 0.10
Brown shrimp	۲	Cra c 6	Troponin C	0.16
Carp	۲	Сурс1	β-Parvalbumin	≤ 0.10
Atlantic cod		Gad m		≤ 0.10
	۲	Gad m 2+3	β-Enolase & Aldolase	≤ 0.10



Name	E/M	Allergen	Function	k	U _A /L
	۲	Gad m 1	β-Parvalbumin	≤ 0.10	
Lobster		Hom g		≤ 0.10	
Shrimp		Lit s		≤ 0.10	
Squid		Lol spp.		0.11	
Common mussel		Myt e		0.11	
Oyster		Ost e		≤ 0.10	
Shrimp		Pan b		≤ 0.10	
Scallop		Pec spp.		≤ 0.10	
Black Tiger Shrimp	۲	Pen m 1	Tropomyosin	≤ 0.10	
	۲	Pen m 2	Arginine kinase	≤ 0.10	
	۲	Pen m 3	Myosin, light chain	0.12	
	۲	Pen m 4	Sarcoplasmic Calcium Binding Protein	≤ 0.10	
Thornback ray		Raj c		≤ 0.10	
	۲	Raj c Parvalbumin	α-Parvalbumin	≤ 0.10	
Clam		Rud spp.		≤ 0.10	
Salmon		Sal s		≤ 0.10	
	۲	Sal s 1	β-Parvalbumin	≤ 0.10	
Atlantic mackerel		Sco s		≤ 0.10	
	۲	Sco s 1	β-Parvalbumin	≤ 0.10	
Tuna		Thu a		≤ 0.10	
	۲	Thu a 1	β-Parvalbumin	≤ 0.10	
Swordfish	۲	Xip g 1	β-Parvalbumin	≤ 0.10	

Meat

House cricket		Ach d		≤ 0.10
Cattle, meat		Bos d_meat		≤ 0.10
	۲	Bos d 6	Serum Albumin	≤ 0.10
Horse, meat		Equ c_meat		≤ 0.10
Chicken meat		Gal d_meat		≤ 0.10
Migratory locust		Loc m		≤ 0.10
Turkey		Mel g		0.18
Rabbit, meat		Ory_meat		≤ 0.10
Sheep, meat		Ovi a_meat		≤ 0.10
Pork		Sus d_meat		≤ 0.10
	۲	Sus d 1	Serum Albumin	≤ 0.10
Mealworm		Ten m		0.11

ALEX Full Panel

Name	E/M	Allergen	Function	kU _A /L

INSECTS & VENOMS

Fire ant poison

Fire ant	Sol spp.	≤ 0.10

Honey Bee Venom

Honey bee		Api m		≤ 0.10
	۲	Api m 1	Phospholipase A2	0.24
	۲	Api m 10	Icarapin Variant 2	≤ 0.10

Wasp Venom

Hornet	Dol spp		≤ 0.10
Paper wasp venom	Pol d		≤ 0.10
	Pol d 5	Antigen 5	≤ 0.10
Wasp venom	Ves v		≤ 0.10
	• Ves v 1	Phospholipase A1	≤ 0.10
	• Ves v 5	Antigen 5	≤ 0.10

Cockroach

German Cockroach	Image Blag 1	Cockroach Group 1	≤ 0.10
	Image Blag 2	Aspartyl protease	≤ 0.10
	Image Blag 4	Lipocalin	0.10
	● Bla g 5	Glutathione S- transferase	≤ 0.10
	Image Blag 9	Arginine kinase	≤ 0.10
American Cockroach	Per a		≤ 0.10
	• Per a 7	Tropomyosin	≤ 0.10

ANIMAL ORIGIN

Pet

Dog	۲	Can f_Fd1	Uteroglobin	≤ 0.10
Male dog urine (incl. Can f 5)		Can f_male urine		≤ 0.10
Dog	۲	Can f 1	Lipocalin	≤ 0.10
	۲	Can f 2	Lipocalin	≤ 0.10
	۲	Can f 3	Serum Albumin	≤ 0.10

Name	E/M	Allergen	Function		kU _A /L
	۲	Can f 4	Lipocalin	≤ 0.10	
	۲	Can f 6	Lipocalin	0.37	
Guinea pig	۲	Cav p 1	Lipocalin	0.22	
Cat	۲	Fel d 1	Uteroglobin	≤ 0.10	
	۲	Fel d 2	Serum Albumin	0.12	
	۲	Fel d 4	Lipocalin	0.32	
	۲	Fel d 7	Lipocalin	≤ 0.10	
House mouse	۲	Mus m 1	Lipocalin	≤ 0.10	
Rabbit, epithel	۲	Ory c 1	Lipocalin	≤ 0.10	
	۲	Ory c 2	Lipophilin	≤ 0.10	
	۲	Ory c 3	Uteroglobin	≤ 0.10	
Djungarian hamster	۲	Phod s 1	Lipocalin	≤ 0.10	
Rat		Rat n		0.20	

Farm Animals

Cattle	۲	Bos d 2	Lipocalin	≤ 0.10
Goat, epithel		Cap h_epithelia		≤ 0.10
Horse, epithel	۲	Equ c 1	Lipocalin	≤ 0.10
	۲	Equ c 3	Serum Albumin	≤ 0.10
	۲	Equ c 4	Latherin	0.17
Sheep, epithel		Ovi a_epithelia		≤ 0.10
Pig		Sus d_epithelia		≤ 0.10

OTHERS

Latex

Latex

	۲	Hev b 1	Rubber elongation factor	-	≤ 0.10
	۲	Hev b 3	Small rubber particle protein		≤ 0.10
	۲	Hev b 5	unknown		≤ 0.10
Ι	۲	Hev b 6.02	Hevein		0.12
Ι	۲	Hev b 8	Profilin		≤ 0.10
Ι	۲	Hev b 11	Class 1 Chitinase		≤ 0.10

Ficus

Weeping fig



OVHA

	E/M Allergen	Function		kU _A /L
CCD				
Hom s Lactoferrin	● Hom s LF	CCD	≤ 0.10	
Parasite				
Pigeon tick	Arg r 1	Lipocalin	≤ 0.10	

17/03/2023

Information to cross-reactive allergens

Storage proteins (2S Albumins, 7/8S Globulins, 11S Globulins)

Storage proteins show a limited degree of cross-reactivity.

Storage proteins are major allergens in legumes (e.g. peanut or soy), tree nuts (e.g. wal- or hazelnut) and other seeds (e.g. buckwheat, sesame, mustard). Storage proteins are the major cause of severe allergic reactions, including anaphylaxis. Storage proteins are stable to processing.

Lipocalins

Lipocalins show a limited degree of cross-reactivity.

Lipocalins are airborne and easily spread in indoor environments. They are a risk factor for respiratory symptoms and asthma. The impact of individual lipocalin allergens on severity of symptoms is unknown.

NPC2

NPC2 allergens show a limited degree of cross-reactivity.

Members of the NPC2 family are present in house dust- and storage mites. The cross-reactivity between Der f 2 and Der p 2 is quite extensive. NPC2 allergens from storage mites show only a limited degree of cross-reactivity to their pendants in house dust mites.

ALEX² – Number of tested allergen sources:



GRASS POLLEN



10

7

6

6

15

6

13

Bahia grass, Bermuda grass, Common reed, Perennial ryegrass, Rye, Timothy grass



TREE POLLEN

Acacia, Alder, Arizona Cypress, European Ash, Beech, Cottonwood, Date palm, Elm, Hazel, London Plane Tree, Mediterranean Cypress, Mountain cedar, Mulberry, Olive, Paper mulberry, Silver birch, Sugi, Tree of Heaven, Walnut



WEED POLLEN

Annual mercury, Hemp, Lamb's guarter, Mugwort, Nettle, Pigweed, Ragweed, Ribwort, Russian thistle, Wall pellitory



HOUSE DUST MITES & STORAGE MITES

Acarus siro, American house dust mite, Blomia tropicalis, European house dust mite, Glycyphagus domesticus, Lepidoglyphus destructor, Tyrophagus putrescentiae



LEGUMES

Chickpea, White bean, Lentil, Pea, Peanut, Soy



GRAINS

11 Barley, Buckwheat, Corn, Cultivated rye, Lupine, Millet, Oat, Quinoa, Rice, Spelt, Wheat



SPICES Anise, Caraway, Mustard, Oregano, Paprika, Parsley



FRUITS

Avocado, Apple, Banana, Blueberry, Cherry, Fig, Grape, Kiwi, Mango, Muskmelon, Orange, Papaya, Peach, Pear, Strawberry



VEGETABLES Carrot, Celery, Garlic, Onion, Potato, Tomato

NUTS & SEEDS Almond, Brazil nut, Cashew, Hazelnut, Macadamia, Pecan, Pistachio, Walnut, Fenugreek seeds, Poppy seed, Pumpkin seed, Sesame, Sunflower seed



COCKROACH

American cockroach, German cockroach



INSECT VENOMS

5

5

2

20

2

Common wasp venom, Fire ant venom, Honeybee venom, Long-headed wasp venom, Paper wasp venom



FUNGAL SPORES & YEAST 6

Alternaria alternata, Aspergillus fumigatus, Baker's yeast, Cladosporium herbarum, Malassezia sympodialis, Penicilium chrysogenum



MILK

Camel's milk, Cow's milk, Goat's milk, Mare's milk, Sheep's milk



EGG Egg white, Egg yolk



FISH & SEAFOOD

Anisakis simplex, Atlantic cod, Atlantic herring, Atlantic mackerel, Black-Tiger shrimp, Brown shrimp, Carp, Common mussel, Crab, Lobster, Northern prawn, Oyster, Salmon, Scallop, Shrimp mix, Squid, Swordfish, Thornback ray, Tuna, Venus clam



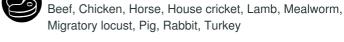
MEAT

10

7

5

4



PETS

Cat, Djungarian hamster, Dog, Guinea pig, Mouse, Rabbit, Rat



FARM ANIMALS Cattle, Goat, Horse, Pig, Sheep

OTHERS Latex, Hom s lactoferrin, Pigeon tick, Weeping fig





OVHA



INTERPRETATION GUIDANCE SOFTWARE

Interpretation - Support Raven Interpretation Summary

Sample Information

The sample was tested on ALEX² Barcode 02AOW051, interpretation date 17/03/2023.

Of the tested 295 allergens, 45 were/was above the cut off of 0.3 kU_A/L. A sensitisation can be an indicator of an IgE dependent allergy. For all positive ALEX 2 allergens, comments for interpretation guidance are listed below.

Total IgE: 2390 kU/L

The measured total IgE was 2390 kU/L. A high total IgE titre indicates that allergy is likely.

Cross-Reactive allergen sensitisation detected

Sensitisations against molecular allergens which are markers of (broad) cross-reactivity between different allergen sources were detected.

Detected cross-reactive allergen sensitisations:

- Cysteine Proteases: Der f 1, Der p 1
- Storage Proteins: Ana o 3, Ara h 2, Cor a 9, Cor a 11, Cor a 14, Gly m 6, Gly m 8, Jug r 1, Jug r 2, Jug r 4, Jug r 6, Pis v 1, Ses i 1, Sin a 1
- Lipocalins: Can f 6, Fel d 4

Cysteine Proteases

Members of the CP allergen family can cause inhalative symptoms, as well as mild to severe forms of food allergy. CP allergens can be found in several fruits, mites and in ragweed pollen. Inhalative symptoms manifest as allergic rhinoconjunctivitis and/or allergic asthma. CP food allergens can cause severe reactions. Fruit CP allergens are resistant to heat and digestion.

Storage Proteins

Members of the storage protein allergen families are able to induce mild and strong allergic reactions and even anaphylactic shock. Allergens of these families can be found in legumes, nuts and seeds. Storage proteins are resistant to heat and digestion. Storage protein allergen families include 2S Albumins, 7/8S & 11S Globulins.

Lipocalins

Nearly all members of the Lipocalin allergen family can cause inhalative symptoms like allergic rhinoconjunctivitis and allergic asthma. Lipocalin from pigeon tick is associated with idiopathic nocturnal anaphylaxis. The degree of cross-reactivity varies wildly between members of this family. Some members of the Lipocalin family serve as markers for AIT indication.

Weed Pollen

Ragweed

Sensitisation to pollen from ragweed was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Amb a 1 is a member of the Pectate Lyase allergen family. The degree of cross-reactivity to allergens from the same family is moderate (e.g. with Art v 6 from mugwort). Amb a 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Causal treatment is possible via AIT - Amb a 1 serves as a marker for AIT indication, if clinical symptoms are present. Symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

Furry Animals

Cat

Sensitisation to cat was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Fel d 4 is a member of the Lipocalin allergen family (LC). A moderate degree of crossreactivity to LC from dog (Can f 4) and horse (Equ c 1) have been described.

If avoidance of cats is not possible, an AIT can be prescribed. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray). Avoidance of exposition to cats is strongly recommended.

Dog

Sensitisation to dog was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Can f 6 is a member of the Lipocalin allergen family (LC). The degree of cross-reactivity to other LCs is low, except for a moderate risk to crossreact with Fel d 4 from cat and Equ c 1 from horse.

If avoidance of dogs is not possible an AIT can be prescribed. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray). Avoidance is strongly recommended.

Mites and Cockroaches

House dust mites

Sensitisation to house dust mite was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to asthma.

Der p 1 & Der f 1 are members of the Cystein Protease allergen family (CP). The degree of cross-reactivity between different members of the CP family in different house dust mites is high. Both Der p 1 and Der f 1 serve as markers for AIT indication, if corresponding symptoms are present. Positive results were obtained for: Der f 1, Der p 1.

Der p 2 & Der f 2 are members of the NPC2 allergen family. The degree of cross-reactivity between different members of the NPC2 is very high in different house dust mites and less so to related allergens in storage mites. Both Der p 2 and Der 2 serve as markers for AIT indication. Positive results were obtained for: Der f 2, Der p 2.

Der p 5 is a member of the Mite Group 5/21 allergen family (MG 5/21). The degree of cross-reactivity to other members of the MG 5/21 allergen family is moderate (e.g. to Blo t 5).

Der p 21 is a member of the Mite Group 5/21 allergen family (MG 5/21). The degree of cross-reactivity to other members of the MG 5/21 allergen family is moderate to high between Der p 21 and Blo t 21.

Der p 23 is a member of the Peritrophin-like Protein allergen family (PLP), which is associated with the development of Asthma. The degree of cross-reactivity to other members of the PLP allergen family is not clear.

Allergen avoidance is advised. Encasings for blankets, matresses and pillows can reduce the allergen load. Der f 1/Der p 1 and Der f 2/Der p 2 are major allergens from house dust mite and serve as markers for AIT indication, if corresponding clinical symptoms are present. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray).

Storage Mites

Sensitisation to storage mites was detected. Allergic symptoms associated with this allergen source range from allergic rhinoconjunctivitis to allergic asthma.

Blo t 5 is a member of the Mite Group 5/21 allergen family (MG 5/21) and a marker for genuine Blomia tropicalis sensitisation. The degree of cross-reactivity to other members of the MG 5/21 allergen family is limited (e.g. to Der p 5). Blo t 5 may serve as a marker for AIT indication, if corresponding clinical symptoms are present.

Blo t 21 is a member of the Mite Group 5/21 allergen family (MG 5/21) and a marker for genuine Blomia tropicalis sensitisation. The degree of cross-eactivity to other members of the MG 5/21 allergen family is limited. Blo t 21 may serve as a marker for AIT indication, if corresponding clinical symptoms are present.

Lep d 2 is a member of the NPC2 allergen family. The degree of cross-reactivity between different members of the NPC2 family is moderate. Lep d 2 may serve as a marker for AIT indication, if corresponding clinical symptoms are present.

Gly d 2 is a member of the NPC2 allergen family. The degree of cross-reactivity between different members of the NPC2 family is moderate. Gly d 2 may serve as a marker for AIT indication, if corresponding clinical symptoms are present.

Tyr p 2 is a member of the NPC2 allergen family. The degree of cross-reactivity between different members of the NPC2 allergen family (from other mite species) is low to moderate. Tyr p 2 may serve as a marker for AIT indication, if corresponding clinical symptoms are present.

Allergen avoidance is advised. Encasings for blankets, matresses and pillows can reduce the allergen load. Blo t 5 and 21, Gly d 2, Lep d 2 and Tyr p 2 may serve as markers for AIT indication, if corresponding clinical symptoms are present. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray).

Cereals and Seeds

Barley

Sensitisation to barley was detected. Allergic symptoms associated with barley Include immediate and excercise induced anaphylaxis, baker's asthma, gastrointestinal- and skin reactions. Allergy to beer can also be caused by an underlying sensitisation to barley.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Oat

Sensitisation to oat was detected. Allergic symptoms associated with oat include baker's asthma, anaphylaxis and skin reactions. A high prevalence of oat sensitisation has been found in children suffering from atopic dermatitis.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Sesame

Sensitisation to sesame was detected. Allergic symptoms associated with sesame allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Ses i 1 is a storage protein associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from sesame and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Ses i 1 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Sunflower seed

Sensitisation to sunflower seed was detected. Allergic symptoms associated with sunflower seeds range from oral allergy syndrome to severe anaphylactic reactions.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Fruits

Kiwi

Sensitisation to kiwi was detected. Allergic symptoms associated with kiwi allergy range from oral allergy syndrome to severe, anaphylactic reactions.

Act d 2 is a member of the TLP allergen family. So far, the clinical importance of TLPs has not been completely understood. The degree of cross-reactivity between Act d 2 and other members (e.g. Mal d 2 from apple) of the TLP allergen family is high. Stability studies showed that TLPs are resistant to heat and digestion.

include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Nuts and Legumes

Almond

Sensitisation to Almond was detected. Allergic symptoms associated with almond range from oral allergy syndrome to skin reactions and gastrointestinal symptoms. Severe allergic reactions to almond are rare.

Include extensive patient training on avoidance measures for mild reactions and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Brazil nut

Sensitisation to Brazil nut was detected. Allergic symptoms associated with Brazil nut range from oral allergy syndrome to anaphylaxis.

Allergen Extract

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Cashew

Sensitisation to cashew was detected. Allergic symptoms associated with cashew range from oral allergy syndrome to severe, anaphylactic reactions.

Ana o 2 and 3 are storage proteins associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from cashew and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Ana o 2 & 3 are stable towards heat and digestion. Positive results were obtained for: Ana o 3.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Chickpea

Sensitisation to Chickpea detected. Allergic symptoms associated with chickpea range from oral allergy syndrome to anaphylaxis. Chickpea allergy may result from primary peanut allergy or occur independently.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Hazelnut

Sensitisation to hazelnut was detected. Allergic symptoms associated with hazelnut allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Cor a 9, 11 & 14 are storage proteins associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from hazelnut and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Cor a 9, 11 & 14 are stable towards heat and digestion. Positive results were obtained for: Cor a 9, Cor a 11, Cor a 14.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Peanut

Sensitisation to peanut was detected. Allergic symptoms associated with peanut allergens range from oral allergy syndrome to severe, anaphylactic reactions.

The peanut storage proteins Ara h 1,2,3 and 6 are associated with clinical reactions up to severe anaphylaxis. The degree of crossreactivity between storage proteins from peanut and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Ara h 1,2,3 & 6 are stable towards heat and digestion. Positive results were obtained for: Ara h 2.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Pecan

Sensitisation to pecan detected. Allergic symptoms associated with pecan range from oral allergy syndrome to anaphylaxis. Pecan strongly cross-reacts with walnut.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Pistachio

Sensitisation to pistachio was detected. Allergic symptoms associated with pistachio range from oral allergy syndrome to anaphylaxis.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Soy

Sensitisation to soy was detected. Allergic symptoms associated with soy allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Gly m 5, 6 & 8 are storage proteins associated with clinical reactions up to severe anaphylaxis. The degree of cross-reactivity between storage proteins from soy and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Gly m 5,6 & 8 are stable towards heat and digestion. Positive results were obtained for: Gly m 6, Gly m 8.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). Fermented soy products (e.g. soy sauce, miso) have lost allergenicity.

Walnut

Sensitisation to walnut was detected. Allergic symptoms associated with walnut allergens range from oral allergy syndrome to severe, anaphylactic reactions.

Jug r 1,2,4 & 6 are storage proteins associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from walnut and storage proteins from legumes, nuts and seeds is low to moderate. The exception is Jug r 6, which can cross-react with related allergens from tree nuts (e.g. Cor a 11 from hazelnut) and sesame. The importance of these cross-reactions has to be analysed on a clinical level. Jug r 1,2,4 are stable towards heat and digestion. Jug r 6 displays intermediate thermal stability and susceptibility to digestion. Positive results were obtained for: Jug r 1, Jug r 2, Jug r 4, Jug r 6.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Spices

Mustard

Sensitisation to mustard seed was detected. Allergic symptoms associated with mustard seed range from oral allergy syndrome to anaphylaxis.

Sin a 1 is a storage protein (2S Albumin) associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from mustard seed and storage proteins from legumes, nuts and seeds is low to moderate. The importance of these cross-reactions has to be analysed on a clinical level. Sin a 1 is stable towards heat and digestion.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Vegetables

Carrot

Sensitisation to carott was detected. Allergic symptoms associated with carott range from oral allergy syndrome to anaphylaxis. Carrot allergy is mostly present in patients with birch or mugwort pollen sensitisation.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

Animal Foods (Milk and Egg)

Cow's milk

Sensitisation to milk was detected. Allergic symptoms associated with milk include severe, anaphylactic reactions, as well as gastrointestinal symptoms and worsening of skin status in individuals suffering from atopic dermatitis. Most children can be expected to outgrow their cow's milk allergy.

Bos d 4 and Bos d 5 are heat labile allergens from cow's milk. Well cooked or baked milk will be tolerated by sensitised patients. Positive results were obtained for: Bos d 5.

Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). Aside from Bos d 8, other cow's milk allergens(Bos d 4, 5 and 6) are not stable to heat.

Egg

Sensitisation to hen's egg was detected. Allergic symptoms associated with hen's egg include severe, anaphylactic reactions, as well gastrointestinal symptoms and worsening of skin status in individuals suffering from atopic dermatitis.

Include intensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases). Aside from Gal d 1, hen's egg allergens are not stable to heat.

Other

Baker's yeast

Sensitisation to baker's yeast was detected. The role of baker's yeast regarding allergic symptoms is unclear. Gastrointestinal, skin and systemic symptoms may be caused by baker's yeast allergy.

Include extensive patient training on avoidance measures.

Allergen Extract

DISCLAIMER: THE PRESENCE OF IgE-ANTIBODIES IMPLIES A RISK OF ALLERGIC REACTIONS AND HAS TO BE ANALYZED IN CONJUNCTION WITH THE CLINICAL HISTORY AND OTHER DIAGNOSTIC TEST RESULTS. THE RAVEN INTERPRETATION GUIDANCE SOFTWARE IS A TOOL TO SUPPORT PHYSICIANS IN THE INTERPRETATION OF ALEX 2 RESULTS. RAVEN COMMENTS DO NOT REPLACE THE DIAGNOSIS BY A PHYSICIAN. NO LIABILITY IS ACCEPTED FOR RAVEN COMMENTS AND RESULTING THERAPEUTIC INTERVENTIONS. THE STATED COMMENTS ARE DESIGNED EXCLUSIVELY FOR ALEX2 RESULTS.