PATIENT CODE
30U4602231

PATIENT NAME
10- ALEX3 v ALEX2

SAMPLE CODE
30U4602231

QR-CODE
03AAQ27D

ALLERGENS
300

TEST METHOD
ALEX³

DOCTOR INFORMATION

ANALYSIS DATE
27/10/2025

PRINT DATE
05/01/2026

ADDITIONAL INFORMATION

YOUR TEST RESULTS ARE THE KEY!

Improve your quality of life with lifestyle ideas and/or nutrition tips that are tailored to your personal test results!

Total IgE result: 341 kU/L

Reference range total IgE
Adults < 100 kU/L

LAB REPORT

Summary of detectable sensitisations

ALEX ALLERGY XPLORER

POLLEN
- Grass Pollen
- Tree Pollen
- Weed Pollen

MITES
- House Dust Mites & Storage Mites

DANDER & EPITHELIA
- Farm Animals
- Pets

MICROORGANISMS
- Fungal Spores & Yeast

INSECTS
- Cockroach

VENOMS
- Ant, Bee, Wasp, Hornet

PLANT-BASED FOOD
- Fruits
- Grains
- Legumes
- Nuts & Seeds
- Spices
- Vegetables

ANIMAL-BASED FOOD
- Egg
- Fish & Seafood
- Meat
- Milk

OTHERS
- CCD
- Ficus
- Latex
- Parasite
- Red meat

Measured IgE concentration ranges per allergen group

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

TECHNOLOGY BY MADX MACRO ARRAY DIAGNOSTICS

Summary of all results - be aware that components are not added to the respective extracts (i.e. extracts are not spiked)!

Pollen

Grass Pollen

Name	E/M	Allergen	Allergen family	kU_A/L
Bermuda grass	M	Cyn d 1	β-Expansin	1.80
Bahia grass	E	Pas n		Negative
Timothy grass	M	Phl p 1	β-Expansin	3.50
	M	Phl p 2	Expansin	3.96
	M	Phl p 5.0101	Grass Group 5/6	4.12
	M	Phl p 6	Grass Group 5/6	0.70
	M	Phl p 7	Polcalcin	Negative
	M	Phl p 12	Profilin	Negative
Common reed	E	Phr c		Negative
Rye pollen	E	Sec c_pollen		1.33
Maize pollen	M	Zea m 1	β-Expansin	1.39

Tree Pollen

Name	E/M	Allergen	Allergen family	kU_A/L
Acacia	E	Aca m		Negative
Tree of heaven	E	Ail a		Negative
Alder	M	Aln g 1	PR-10	9.06
	M	Aln g 4	Polcalcin	Negative
Silver birch	M	Bet v 1	PR-10	11.00
	M	Bet v 6	Isoflavon Reductase	Negative
	M	Bet v 7	Cyclophilin	Negative
Paper mulberry	E	Bro pa		Negative
Sugi	M	Cry j 1	Pectate Lyase	Negative
Arizona cypress	M	Cup a 1	Pectate Lyase	0.22
Cypress	E	Cup s		Negative
Ash	M	Fra e 1	Ole e 1 Family	Negative
Walnut	E	Jug r_pollen		Negative
Mountain cedar	E	Jun a		Negative
Olive	M	Ole e 1	Ole e 1 Family	Negative
	M	Ole e 7	nsLTP	Negative
	M	Ole e 9	β-1,3-Glucanase	Negative
London plane tree	M	Pla a 1	Plant Invertase	Negative
	M	Pla a 2	Polygalacturonase	Negative
	M	Pla a 3	nsLTP	Negative
Oak	M	Que a 1	PR-10	12.66

Weed Pollen

Name	E/M	Allergen	Allergen family	kU$_A$/L
Pigweed	⁘	Ama r		Negative
Ragweed	⁘	Amb a		Negative
	⊙	Amb a 1	Pectate Lyase	Negative
	⊙	Amb a 4	Plant Defensin	Negative
Mugwort	⁘	Art v		Negative
	⊙	Art v 1	Plant Defensin	Negative
	⊙	Art v 3	nsLTP	Negative
Hemp	⁘	Can s		Negative
	⊙	Can s 3	nsLTP	Negative
Lamb's quarter	⁘	Che a		Negative
	⊙	Che a 1	Ole e 1 Family	Negative
Wall pellitory	⁘	Par j		Negative
	⊙	Par j 2	nsLTP	Negative
Ribwort	⊙	Pla l 1	Ole e 1 Family	Negative
Russian thistle	⁘	Sal k		Negative
	⊙	Sal k 1	Pectin Methylesterase	Negative
	⊙	Sal k 5	Ole e 1 Family	Negative

Mites

House Dust Mites & Storage Mites

Name	E/M	Allergen	Allergen family	kU$_A$/L
Acarus siro	⁘	Aca s		Negative
Blomia tropicalis	⊙	Blo t 2	NPC2 Family	Negative
	⊙	Blo t 5	Mite Group 5/21	3.88
	⊙	Blo t 10	Tropomyosin	Negative
	⊙	Blo t 21	Mite Group 5/21	Negative
American house dust mite	⊙	Der f 1	Cysteine Protease	0.60
	⊙	Der f 2	NPC2 Family	Negative
	⊙	Der f 15	Chitinase	Negative
	⊙	Der f 18	Chitinase-like Protein	1.29
European house dust mite	⊙	Der p 1	Cysteine Protease	8.13
	⊙	Der p 2	NPC2 Family	Negative
	⊙	Der p 5	Mite Group 5/21	Negative
	⊙	Der p 7	Mite Group 7	Negative
	⊙	Der p 10	Tropomyosin	Negative
	⊙	Der p 20	Arginine Kinase	Negative
	⊙	Der p 21	Mite Group 5/21	8.56
	⊙	Der p 23	Peritrophin-like Protein Domain	6.88
Glycyphagus domesticus	⊙	Gly d 2	NPC2 Family	Negative

Name	E/M	Allergen	Allergen family	kU_A/L
Lepidoglyphus destructor	⦿	Lep d 2	NPC2 Family	Negative
Tyrophagus putrescentiae	⁘	Tyr p		0.15
	⦿	Tyr p 2	NPC2 Family	Negative
	⦿	Tyr p 10	Tropomyosin	Negative

Dander & Epithelia

Farm Animals

Name	E/M	Allergen	Allergen family	kU_A/L
Cattle	⦿	Bos d 2	Lipocalin	Negative
Goat	⁘	Cap h_epithelia		Negative
Horse	⦿	Equ c 1	Lipocalin	Negative
	⦿	Equ c 3	Serum Albumin	Negative
	⦿	Equ c 4	Latherin	Negative
Pig	⁘	Sus d_epithelia		Negative

Pets

Name	E/M	Allergen	Allergen family	kU_A/L
Dog	⦿	Can f Fel d 1 like	Uteroglobin	3.42
Dog urine (incl. Can f 5)	⁘	Can f_male urine		Negative
Dog	⦿	Can f 1	Lipocalin	0.49
	⦿	Can f 2	Lipocalin	Negative
	⦿	Can f 3	Serum Albumin	Negative
	⦿	Can f 4	Lipocalin	8.99
	⦿	Can f 6	Lipocalin	Negative
Guinea pig	⦿	Cav p 1	Lipocalin	Negative
Cat	⦿	Fel d 1	Uteroglobin	23.93
	⦿	Fel d 2	Serum Albumin	Negative
	⦿	Fel d 4	Lipocalin	7.32
	⦿	Fel d 7	Lipocalin	9.21
Golden hamster	⦿	Mes a 1	Lipocalin	Negative
Mouse	⦿	Mus m 1	Lipocalin	Negative
Rabbit	⦿	Ory c 1	Lipocalin	Negative
	⦿	Ory c 2	Lipocalin	Negative
	⦿	Ory c 3	Uteroglobin	Negative
Djungarian hamster	⦿	Phod s 1	Lipocalin	Negative
Rat	⦿	Rat n 1	Lipocalin	Negative

Microorganisms

Fungal Spores & Yeast

Name	E/M	Allergen	Allergen family	kU_A/L	
Alternaria alternata	⦿	Alt a 1	Alt a 1 Family		Negative
	⦿	Alt a 6	Enolase		Negative
Aspergillus fumigatus	⦿	Asp f 1	Mitogillin Family		Negative
	⦿	Asp f 3	Peroxysomal Protein		Negative
	⦿	Asp f 4	Unknown		Negative
	⦿	Asp f 6	Mn Superoxide Dismutase		Negative
	⦿	Asp f 8	Ribosomal Protein P2		Negative
Cladosporium herbarum	⁘	Cla h			Negative
	⦿	Cla h 8	Mannitol Dehydrogenase		Negative
Malassezia sympodialis	⦿	Mala s 5	Unknown		Negative
	⦿	Mala s 6	Cyclophilin		0.11
	⦿	Mala s 11	Mn Superoxide Dismutase		Negative
	⦿	Mala s 13	Thioredoxin		Negative
Penicilium chrysogenum	⁘	Pen ch			Negative

Insects

Cockroach

Name	E/M	Allergen	Allergen family	kU_A/L	
German cockroach	⦿	Bla g 1	Nitrile Specifier		Negative
	⦿	Bla g 2	Aspartic Protease		Negative
	⦿	Bla g 4	Lipocalin		Negative
	⦿	Bla g 5	Glutathione S-Transferase		Negative
	⦿	Bla g 9	Arginine Kinase		Negative
American cockroach	⁘	Per a			Negative
	⦿	Per a 6	Troponin C		Negative
	⦿	Per a 7	Tropomyosin		Negative

Venoms

Ant, Bee, Wasp, Hornet

Name	E/M	Allergen	Allergen family	kU_A/L	
Honey bee	⁘	Api m			Negative
	⦿	Api m 1	Phospholipase A2		Negative
	⦿	Api m 2	Hyaluronidase		0.11
	⦿	Api m 10	Icarapin Variant 2		Negative
Bald-faced Hornet	⦿	Dol m 2	Hyaluronidase		Negative
	⦿	Dol m 5	Antigen 5		Negative
Paper wasp	⁘	Pol d			Negative
	⦿	Pol d 5	Antigen 5		Negative
Fire ant	⁘	Sol spp			Negative
Common wasp	⦿	Ves v 1	Phospholipase A1		Negative

Name	E/M	Allergen	Allergen family	kU_A/L	
	⦿	Ves v 5	Antigen 5		Negative

Plant-Based Food

Fruits

Name	E/M	Allergen	Allergen family	kU_A/L	
Kiwi	⦿	Act d 1	Cysteine Protease		Negative
	⦿	Act d 2	Thaumatin-like Protein		0.17
	⦿	Act d 5	Kiwellin		Negative
	⦿	Act d 10	nsLTP		Negative
Papaya	⁘	Car p			Negative
Coconut	⦿	Coc n 1	7/8S Globulin		Negative
Muskmelon	⦿	Cuc m 2	Profilin		Negative
Fig	⁘	Fic c			Negative
Strawberry	⦿	Fra a 3	nsLTP		Negative
Apple	⦿	Mal d 1	PR-10		1.25
	⦿	Mal d 3	nsLTP		Negative
Mango	⦿	Man i 1	Class 4 Chitinase		Negative
Banana	⦿	Mus a 2	Class 1 Chitinase		Negative
	⦿	Mus a 5	β-1,3-Glucanase		Negative
Avocado	⁘	Pers a			Negative
	⦿	Pers a 1	Class 1 Chitinase		Negative
Cherry	⦿	Pru av 3	nsLTP		Negative
Peach	⦿	Pru p 3	nsLTP		Negative
	⦿	Pru p 7	Gibberellin-regulated Protein		Negative
Pear	⁘	Pyr c			0.15
Grape	⦿	Vit v 1	nsLTP		Negative

Grains

Name	E/M	Allergen	Allergen family	kU_A/L	
Oat	⁘	Ave s			Negative
Quinoa	⁘	Che q			Negative
Buckwheat	⁘	Fag e			Negative
	⦿	Fag e 2	2S Albumin		Negative
Barley	⁘	Hor v			Negative
Lupine seed	⁘	Lup a			Negative
Millet	⁘	Pan m			Negative
Cultivated rye	⁘	Sec c_flour			Negative
Wheat	⦿	Tri a aA_TI	α-Amylase Trypsin-Inhibitor		Negative
	⦿	Tri a 14	nsLTP		Negative
	⦿	Tri a 19	Ω-5-Gliadin		Negative

Name	E/M	Allergen	Allergen family	kU_A/L
	⊙	Tri a 36	Low Molecular Weight Glutenin	Negative
	⊙	Tri a 37	α-Purothionin	Negative
Spelt	⁘	Tri s		Negative
Maize	⁘	Zea m		Negative
	⊙	Zea m 14	nsLTP	Negative

Legumes

Name	E/M	Allergen	Allergen family	kU_A/L
Peanut	⊙	Ara h 1	7/8S Globulin	Negative
	⊙	Ara h 2	2S Albumin	Negative
	⊙	Ara h 3	11S Globulin	Negative
	⊙	Ara h 6	2S Albumin	Negative
	⊙	Ara h 8	PR-10	Negative
	⊙	Ara h 9	nsLTP	Negative
	⊙	Ara h 15	Oleosin	Negative
	⊙	Ara h 18	Cyclophilin	Negative
Chickpea	⁘	Cic a		Negative
Soy	⊙	Gly m 4	PR-10	Negative
	⊙	Gly m 5	7/8S Globulin	Negative
	⊙	Gly m 6	11S Globulin	Negative
	⊙	Gly m 8	2S Albumin	0.11
Lentil	⊙	Len c 1	7/8S Globulin	Negative
	⊙	Len c 3	nsLTP	Negative
Pine nut	⁘	Pin p		Negative
	⊙	Pin p 1	2S Albumin	Negative
Pea	⊙	Pis s 1	7/8S Globulin	Negative
	⊙	Pis s 2	7/8S Globulin	Negative
	⊙	Pis s 3	nsLTP	Negative

Nuts & Seeds

Name	E/M	Allergen	Allergen family	kU_A/L
Cashew	⊙	Ana o 1	7/8S Globulin	Negative
	⊙	Ana o 2	11S Globulin	Negative
	⊙	Ana o 3	2S Albumin	Negative
Brazil nut	⁘	Ber e		Negative
	⊙	Ber e 1	2S Albumin	Negative
Pecan	⁘	Car i		Negative
	⊙	Car i 1	2S Albumin	Negative
	⊙	Car i 2 (256-386)	7/8S Globulin	Negative
	⊙	Car i 4	11S Globulin	Negative
Hazelnut	⊙	Cor a 1.0401	PR-10	31.33
	⊙	Cor a 8	nsLTP	Negative

Name	E/M	Allergen	Allergen family	kU_A/L	
	◉	Cor a 9	11S Globulin		Negative
	◉	Cor a 11	7/8S Globulin		Negative
	◉	Cor a 14	2S Albumin		Negative
Pumpkin seed	⁘	Cuc p			Negative
Sunflower seed	⁘	Hel a			Negative
	◉	Hel a 3	nsLTP		Negative
Walnut	◉	Jug r 1	2S Albumin		Negative
	◉	Jug r 2	7/8S Globulin		Negative
	◉	Jug r 3	nsLTP		Negative
	◉	Jug r 4	11S Globulin		Negative
	◉	Jug r 6	7/8S Globulin		Negative
Macadamia	⁘	Mac i			Negative
	◉	Mac i 1.0101 (28-76)	α-Hairpinin		Negative
Poppy seed	⁘	Pap s			Negative
	◉	Pap s 1.0101 (27-846)	α-Hairpinin		Negative
Pistachio	◉	Pis v 1	2S Albumin		Negative
	◉	Pis v 2	11S Globulin		Negative
	◉	Pis v 3	7/8S Globulin		Negative
Almond	⁘	Pru du			Negative
	◉	Pru du 6	11S Globulin		Negative
Sesame	⁘	Ses i			Negative
	◉	Ses i 1	2S Albumin		Negative

Spices

Name	E/M	Allergen	Allergen family	kU_A/L	
Mustard	⁘	Sin a			Negative
	◉	Sin a 1	2S Albumin		Negative

Vegetables

Name	E/M	Allergen	Allergen family	kU_A/L	
Onion	⁘	All c			Negative
Garlic	⁘	All s			Negative
Celery	◉	Api g 1	PR-10		Negative
	◉	Api g 2	nsLTP		Negative
	◉	Api g 6	nsLTP		Negative
	◉	Api g 7	Plant Defensin		Negative
Potato	⁘	Sol t			Negative
Tomato	⁘	Sola l			Negative
	◉	Sola l 6	nsLTP		Negative

Animal-Based Food

Egg

Name	E/M	Allergen	Allergen family	kU_A/L
Egg white	⁘	Gal d_white		Negative
Egg yolk	⁘	Gal d_yolk		Negative
Egg white	⊙	Gal d 1	Ovomucoid	Negative
	⊙	Gal d 2	Ovalbumin	0.10
	⊙	Gal d 3	Ovotransferrin	0.16
	⊙	Gal d 4	Lysozyme C	Negative
Egg yolk	⊙	Gal d 5	Serum Albumin	Negative

Fish & Seafood

Name	E/M	Allergen	Allergen family	kU_A/L
Anisakis simplex	⊙	Ani s 1	Kunitz Serine Protease Inhibitor	Negative
	⊙	Ani s 3	Tropomyosin	Negative
Crab	⁘	Chi spp		Negative
Herring	⁘	Clu h		Negative
	⊙	Clu h 1	β-Parvalbumin	Negative
Brown shrimp	⊙	Cra c 6	Troponin C	Negative
Carp	⊙	Cyp c 1	β-Parvalbumin	Negative
	⊙	Cyp c 2	Enolase	Negative
Atlantic cod	⊙	Gad m 1	β-Parvalbumin	Negative
Lobster	⁘	Hom g		Negative
Shrimp	⁘	Lit spp		Negative
Whiteleg shrimp	⊙	Lit v 7	Hemocyanin	Negative
Squid	⁘	Lol spp		Negative
Giant freshwater prawn	⊙	Mac r 1	Tropomyosin	Negative
	⊙	Mac r 2	Arginine Kinase	Negative
Northern prawn	⁘	Pan b		Negative
Black tiger shrimp	⊙	Pen m 1	Tropomyosin	Negative
	⊙	Pen m 2	Arginine Kinase	Negative
	⊙	Pen m 3	Myosin Light Chain	Negative
	⊙	Pen m 4	Sarcoplasmic Calcium-binding Protein	Negative
Thornback ray	⁘	Raj c		Negative
	⊙	Raj c Parvalbumin	α-Parvalbumin	Negative
Venus clam	⁘	Rud spp		Negative
Salmon	⁘	Sal s		Negative
	⊙	Sal s 1	β-Parvalbumin	Negative
	⊙	Sal s 6	Collagen	Negative
Atlantic mackerel	⁘	Sco s		Negative
	⊙	Sco s 1	β-Parvalbumin	Negative

Name	E/M	Allergen	Allergen family	kU$_A$/L	
Tuna	◉	Thu a 1	β-Parvalbumin		Negative
Swordfish	◉	Xip g 1	β-Parvalbumin		Negative

Meat

Name	E/M	Allergen	Allergen family	kU$_A$/L	
House cricket	⁘	Ach d			Negative
Beef	⁘	Bos d_meat			Negative
	◉	Bos d 6	Serum Albumin		Negative
Horse	⁘	Equ c_meat			Negative
Chicken	⁘	Gal d_meat			Negative
	◉	Gal d 7	Myosin Light Chain		Negative
Migratory locust	⁘	Loc m			Negative
Turkey	⁘	Mel g			Negative
Rabbit	⁘	Ory c_meat			Negative
Lamb	⁘	Ovi a_meat			Negative
Pork	◉	Sus d 1	Serum Albumin		Negative
Mealworm	⁘	Ten m			Negative

Milk

Name	E/M	Allergen	Allergen family	kU$_A$/L	
Cow's milk	⁘	Bos d_milk			Negative
	◉	Bos d 4	α-Lactalbumin		Negative
	◉	Bos d 5	β-Lactoglobulin		Negative
	◉	Bos d 8	Casein		Negative
	◉	Bos d 9	α-S1 Casein		Negative
	◉	Bos d 10	α-S2 Casein		Negative
	◉	Bos d 11	β-Casein		Negative
	◉	Bos d 12	κ-Casein		Negative
Camel's milk	⁘	Cam d			Negative
Goat's milk	⁘	Cap h_milk			Negative
Mare's milk	⁘	Equ c_milk			Negative
Sheep's milk	⁘	Ovi a_milk			Negative

Others

CCD

Name	E/M	Allergen	Allergen family	kU$_A$/L	
Hom s Lactoferrin	◉	Hom s LF	CCD		Negative

Ficus

Name	E/M	Allergen	Allergen family	kU_A/L	
Weeping fig	⁘	Fic b			Negative

Latex

Name	E/M	Allergen	Allergen family	kU_A/L	
Latex	⊙	Hev b 1	Rubber Elongation Factor		Negative
	⊙	Hev b 3	Small Rubber Particle Protein		Negative
	⊙	Hev b 5	Unknown		0.10
	⊙	Hev b 6.02	Pro-Hevein		Negative
	⊙	Hev b 11	Class 1 Chitinase		Negative

Parasite

Name	E/M	Allergen	Allergen family	kU_A/L	
Pigeon tick	⊙	Arg r 1	Lipocalin		Negative

Red meat

Name	E/M	Allergen	Allergen family	kU_A/L	
Red meat	⊙	Alpha-GAL	α-Gal		Negative

Information to cross-reactive allergens

PR-10

Name	E/M	Allergen	Allergen family	kU_A/L	
Alder	⊙	Aln g 1	PR-10		9.06
Silver birch	⊙	Bet v 1	PR-10		11.00
Hazelnut	⊙	Cor a 1.0401	PR-10		31.33
Apple	⊙	Mal d 1	PR-10		1.25
Oak	⊙	Que a 1	PR-10		12.66

Lipocalin

Name	E/M	Allergen	Allergen family	kU_A/L	
Dog	⊙	Can f 1	Lipocalin		0.49
	⊙	Can f 4	Lipocalin		8.99
Cat	⊙	Fel d 4	Lipocalin		7.32
	⊙	Fel d 7	Lipocalin		9.21

Uteroglobin

Name	E/M	Allergen	Allergen family	kU_A/L	
Dog	⊙	Can f Fel d 1 like	Uteroglobin		3.42
Cat	⊙	Fel d 1	Uteroglobin		23.93

β-Expansin

Name	E/M	Allergen	Allergen family	kU_A/L
Bermuda grass	⦿	Cyn d 1	β-Expansin	1.80
Timothy grass	⦿	Phl p 1	β-Expansin	3.50
Maize pollen	⦿	Zea m 1	β-Expansin	1.39

Raven Interpretation Summary

SAMPLE INFORMATION

The sample was tested on QR code 03AAQ27D, interpretation date 01/12/2025.

Of the tested 299 allergens, 24 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 allergens, comments for interpretation guidance are listed below.

TOTAL IGE: 341 KU/L

The measured total IgE was 341 kU/L. With a total IgE titre above 100 kU/L, 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:

- PR-10s: Aln g 1, Bet v 1, Cor a 1.0401, Mal d 1
- Cysteine Proteases: Der f 1, Der p 1
- Lipocalins: Can f 1, Can f 4, Fel d 4, Fel d 7

PR-10 Proteins

PR-10 inhalative: The major birch pollen allergen, Bet v 1, represents the prototype of all PR-10 allergens and is the primary sensitiser in regions with birch-pollen exposure. The presence of PR-10 allergens in birch related tree pollen explains possible IgE cross-reactivity between pollen from hazel, alder, beech, oak and hornbeam. PR-10 nutritive: PR-10 allergens in fresh fruits, nuts, vegetables and legumes can induce oral allergy syndrome and sometimes even severe allergic reactions in sensitised individuals. PR-10 allergens are not stable to heat and digestion.

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.

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.

TREE POLLEN

Birch Family

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

Aln g 1 is a member of the PR-10 allergen family and is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Aln g 1 and pollen- as well as food-allergens from the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. Aln g 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Bet v 1 is the major allergen in birch pollen and a member of the PR-10 allergen family. It is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Bet v 1 and pollen- as well as food-allergens from the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. Bet v 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Que a 1 is a member of the PR-10 allergen family and is associated with inhalative symptoms and mostly mild forms of food allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Que a 1 and pollen- as well as food-allergens from the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. Que a 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Causal treatment is possible via AIT, symptomatic treatment includes anti-histamines and local corticosteroids in various formulations (tablet, spray).

GRASS POLLEN

Sensitisation to grass pollen was detected. Allergic symptoms associated with grass pollen range from allergic rhinoconjunctivitis to allergic asthma.

Cyn d 1, Lol p 1, Phl p 1 and Zea m 1 are members fo the β-Expansin allergen family. The degree of cross-reactivity between members of this allergen family is very high. β-Expansins serve as markers for AIT indication, if corresponding clinical symptoms are present. Positive results were obtained for: Cyn d 1, Phl p 1, Zea m 1.

Phl p 2 is a member of the Expansin allergen family. The degree of cross-reactivity between members of this allergen family is very high. Along with Phl p 1 and 5, Phl p 2 serves as a marker of true grass-pollen sensitisation. Patients with isolated Sensitisation to Phl p 2 are not suitable candidates for AIT.

Phl p 5 is a member of the Grass Group 5/6 allergen family. The degree of cross-reactivity between members of this allergen family is high, although a Grass Group 5/6 allergen has not been described in all grass pollen species. Along with Phl p 1 and Phl p 2, Phl p 5 serves as marker of true grass-pollen sensitisation. Phl p 1 and 5 serve as markers for AIT indication, if corresponding clinical symptoms are present.

Phl p 6 is a member of the Grass Group 5/6 allergen family. The degree of cross-reactivity between members of this allergen family is high.

Causal treatment is possible via AIT - Phl p 1 and 5 serve as markers for AIT indication, if corresponding 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 1 is a member of the Uteroglobin (UG) allergen family and a marker for genuine cat allergy. Fel d 1 also serves as a marker for AIT indication, if corresponding clinical symptoms are present. The degree of cross-reactivity between Fel d 1 and other members of the UG allergen family is low to moderate (e.g. Can f Fel d 1 like from dog).

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.

Fel d 7 is a member of of the Lipocalin allergen family (LC). A moderate degree of crossreactivity to LC from dog (Can f 1) has 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 1 is a member of the Lipocalin allergen family (LC). There is a moderate risk of cross-reactivity with Fel d 7, a LC from cat. Can f 1 serves as a specific marker for dog sensitisation and as a marker for AIT, if corresponding clinical symptoms are present. The highest concentrations are found in fur and saliva.

Can f 4 is a member of the Lipocalin allergen family (LC). The degree of cross-reactivity to other members of the LC family is very low. A low degree of cross-reactivity has been reported with a related allergen from cattle. Can f 4 is the most abundant allergen in dog fur.

Can f Fel d 1 like is a member of the Uteroglobin like allergen family. The degree of cross-reactivity to Fel d 1 from cat is moderate.

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 f 18 is a member of the Chitinase Class III allergen family. The degree of cross-reactivity to other members of this family is high to its pendant in D. pteronyssinus, medium to its pendant in B. tropicalis and E. maynei and low with other mites.

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, mattresses 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.

Allergen avoidance is advised. Encasings for blankets, mattresses 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).

FRUITS

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

Mal d 1 is a member of the PR-10 allergen family and is associated with mild forms of apple allergy (e.g. oral allergy syndrome). The degree of cross-reactivity between Mal d 1 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases a Mal d 1 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Mal d 1 is not stable towards heat and digestion.

As Mal d 1 is heat sensitive, baked or cooked apple can be consumed without danger for clinical reactions. In case of genuine apple allergy due to sensitisations to Mal d 2 and/or 3, avoidance is the therapeutic option of choice. Mal d 3 is primarily located in fruit skin, peeled apple is tolerated by most patients with Mal d 3 sensitisation. Include extensive patient training on avoidance measures and the prescription of an emergency kit (including adrenalin autoinjector for severe cases).

NUTS AND LEGUMES

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

Cor a 1.0401 is a member of the PR-10 allergen family and is associated with mild forms of hazelnut allergy e.g. oral allergy syndrome. In rare cases, mild systemic reactions occur. Severe anaphylactic reactions are very rare. The degree of cross-reactivity between Cor a 1.0401 and other members of the PR-10 allergen family is high. The importance of these cross-reactions has to be analysed on a clinical level. In most cases a Cor a 1.0401 sensitisation is caused by a primary sensitisation against Bet v 1 from birch pollen. Cor a 1.0401 is not 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).
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 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 ALEX RESULTS.

ALEX³ – Number of tested allergen sources

Grass Pollen 6

Bahia grass, Bermuda grass, Common reed, Maize pollen, Rye pollen, Timothy grass

Tree Pollen 14

Acacia, Alder, Arizona cypress, Ash, Cypress, London plane tree, Mountain cedar, Oak, Olive, Paper mulberry, Silver birch, Sugi, Tree of heaven, Walnut

Weed Pollen 8

Hemp, Lamb's quarter, Mugwort, Pigweed, Ragweed, Ribwort, Russian thistle, Wall pellitory

House Dust Mites & Storage Mites 7

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

Vegetables 5

Celery, Garlic, Onion, Potato, Tomato

Nuts & Seeds 12

Almond, Brazil nut, Cashew, Hazelnut, Macadamia, Pecan, Pistachio, Poppy seed, Pumpkin seed, Sesame, Sunflower seed, Walnut

Legumes 6

Chickpea, Lentil, Pea, Peanut, Pine nut, Soy

Grains 10

Barley, Buckwheat, Cultivated rye, Lupine seed, Maize, Millet, Oat, Quinoa, Spelt, Wheat

Spices 1

Mustard

Fruits 14

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

Cockroach 2

American cockroach, German cockroach

Ant, Bee, Wasp, Hornet 5

Bald-faced Hornet, Common wasp, Fire ant, Honey bee, Paper wasp

Fungal Spores & Yeast 5

Alternaria alternata, Aspergillus fumigatus, Cladosporium herbarum, Malassezia sympodialis, Penicilium chrysogenum

Milk 5

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

Egg 2

Egg white, Egg yolk

Fish & Seafood 19

Anisakis simplex, Atlantic cod, Atlantic mackerel, Black tiger shrimp, Brown shrimp, Carp, Crab, Giant freshwater prawn, Herring, Lobster, Northern prawn, Salmon, Shrimp, Squid, Swordfish, Thornback ray, Tuna, Venus clam, Whiteleg shrimp

Meat 10

Beef, Chicken, Horse, House cricket, Lamb, Mealworm, Migratory locust, Pork, Rabbit, Turkey

Pets 9

Cat, Djungarian hamster, Dog, Dog urine (incl. Can f 5), Golden hamster, Guinea pig, Mouse, Rabbit, Rat

Farm Animals 4

Cattle, Goat, Horse, Pig

Others 5

Hom s Lactoferrin, Latex, Pigeon tick, Red meat, Weeping fig