







PATIENT ID:  XXXX	REFERRING PHYSICIAN: XXXX
PATIENT NAME:  XXXX	ADDITIONAL INFORMATION:
DATE OF BIRTH:  01/01/2001	The internal QC (Plausibility check for GD) was within acceptance range.
SAMPLE CODE:  XXXX	
QR-CODE:  02BGZ0F6	
ANALYZED ON:  30/10/2023	
APPROVED ON: 22/11/2023	
PRINTED ON: 06/02/2024	

## Lab report: Summary on detectable sensitisations

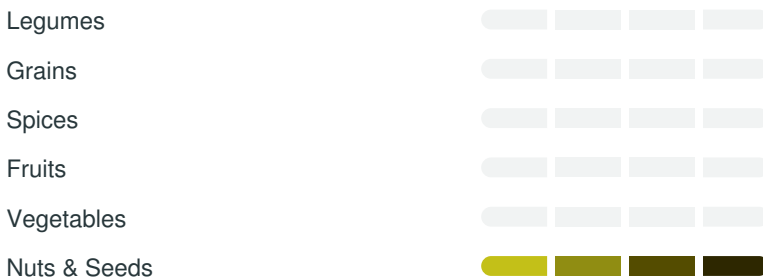
### POLLEN



### MITES



### PLANT-BASED FOOD



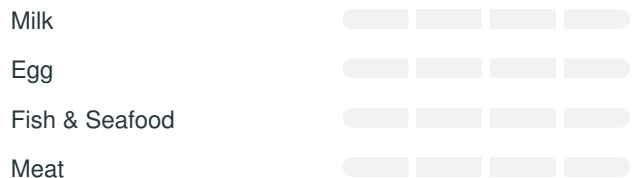
### INSECTS & VENOMS



### MICROORGANISMS



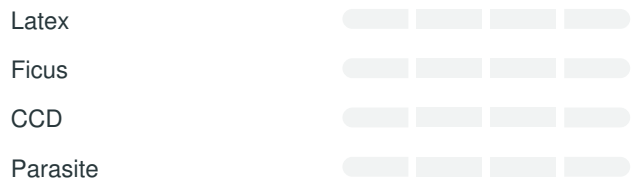
### ANIMAL-DERIVED FOOD



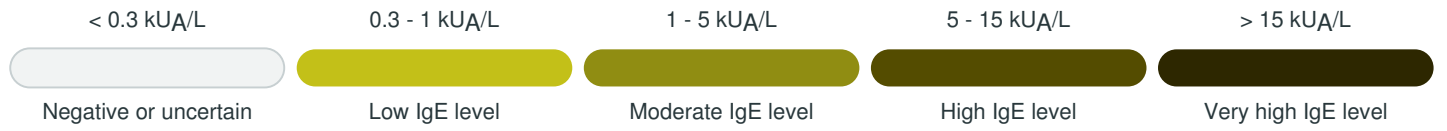
### EPITHELIAL TISSUES OF ANIMALS



### OTHERS



**Highest measured IgE concentration per allergen group**



Name	E/M	Allergen	Function	kU <sub>A</sub> /L
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## POLLEN

### Grass Pollen

Bermuda grass	●●●●	Cyn d		≤ 0.10
	⊙	Cyn d 1	Beta-Expansin	≤ 0.10
Perennial Ryegrass	⊙	Lol p 1	Beta-Expansin	≤ 0.10
Bahia grass	●●●●	Pas n		≤ 0.10
Timothy grass	⊙	Phl p 1	Beta-Expansin	0.23
	⊙	Phl p 2	Expansin	≤ 0.10
	⊙	Phl p 5.0101	Grass Group 5/6	≤ 0.10
	⊙	Phl p 6	Grass Group 5/6	≤ 0.10
	⊙	Phl p 7	Polcalcin	≤ 0.10
	⊙	Phl p 12	Profilin	≤ 0.10
Common reed	●●●●	Phr c		≤ 0.10
Cultivated rye, Pollen	●●●●	Sec c_pollen		≤ 0.10

### Tree Pollen

Acacia	●●●●	Aca m		≤ 0.10
Tree of Heaven	●●●●	Ail a		≤ 0.10
Alder	⊙	Aln g 1	PR-10	≤ 0.10
	⊙	Aln g 4	Polcalcin	≤ 0.10
Silver birch	⊙	Bet v 1	PR-10	≤ 0.10
	⊙	Bet v 2	Profilin	≤ 0.10
	⊙	Bet v 6	Isoflavon Reductase	≤ 0.10
Paper mulberry	●●●●	Bro pa		≤ 0.10
Hazel pollen	●●●●	Cor a_pollen		≤ 0.10
	⊙	Cor a 1.0103	PR-10	≤ 0.10
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 <sub>A</sub> /L
	⊙	Ole e 9	1,3 β Glucanase	≤ 0.10
Date palm	⊙	Pho d 2	Profilin	≤ 0.10
London plane tree	⊙	Pla a 1	Plant Invertase	≤ 0.10
	⊙	Pla a 2	Polygalacturonase	≤ 0.10
	⊙	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		≤ 0.10
	⊙	Amb a 1	Pectate Lyase	≤ 0.10
	⊙	Amb a 4	Plant Defensin	≤ 0.10
Mugwort	⦿	Art v		≤ 0.10
	⊙	Art v 1	Plant Defensin	≤ 0.10
	⊙	Art v 3	nsLTP	≤ 0.10
Hemp	⦿	Can s		≤ 0.10
	⊙	Can s 3	nsLTP	≤ 0.10
Lamb's quarter	⦿	Che a		≤ 0.10
	⊙	Che a 1	Ole e 1-Family	≤ 0.10
Annual mercury	⊙	Mer a 1	Profilin	≤ 0.10
Wall pellitory	⦿	Par j		≤ 0.10
	⊙	Par j 2	nsLTP	≤ 0.10
Ribwort	⦿	Pla l		≤ 0.10
	⊙	Pla l 1	Ole e 1-Family	≤ 0.10
Russian thistle	⦿	Sal k		≤ 0.10
	⊙	Sal k 1	Pectin Methylesterase	≤ 0.10
Nettle	⦿	Urt d		≤ 0.10

### MITES

#### House Dust Mite

American house dust mite	⊙	Der f 1	Cysteine protease	29.76
	⊙	Der f 2	NPC2 Family	≥ 50.00
European house dust mite	⊙	Der p 1	Cysteine protease	≥ 50.00
	⊙	Der p 2	NPC2 Family	≥ 50.00
	⊙	Der p 5	unknown	≥ 50.00

Name	E/M	Allergen	Function	kU <sub>A</sub> /L
	⊙	Der p 7	Mites, Group 7	≤ 0.10
	⊙	Der p 10	Tropomyosin	≤ 0.10
	⊙	Der p 11	Myosin, heavy chain	≤ 0.10
	⊙	Der p 20	Arginine kinase	≤ 0.10
	⊙	Der p 21	unknown	2.03
	⊙	Der p 23	Peritrophin-like protein domain	9.77

### Storage Mite

Acarus siro	⊙	Aca s		0.51
Blomia tropicalis	⊙	Blo t 5	Mites, Group 5	0.59
	⊙	Blo t 10	Tropomyosin	≤ 0.10
	⊙	Blo t 21	unknown	≤ 0.10
Glycyphagus domesticus	⊙	Gly d 2	NPC2 Family	≤ 0.10
Lepidoglyphus destructor	⊙	Lep d 2	NPC2 Family	≤ 0.10
Tyrophagus putrescentiae	⊙	Tyr p		≤ 0.10
	⊙	Tyr p 2	NPC2 Family	≤ 0.10

## MICROORGANISMS & SPORES

### Yeast

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

### 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	Peroxisomal Protein	≤ 0.10
	⊙	Asp f 4	unknown	≤ 0.10
	⊙	Asp f 6	Mn Superoxid-Dismutase	≤ 0.10
Cladosporium herbarum	⊙	Cla h		≤ 0.10
	⊙	Cla h 8	Short Chain Dehydrogenase	≤ 0.10
Penicillium chrysogenum	⊙	Pen ch		≤ 0.10

Name	E/M	Allergen	Function	kU <sub>A</sub> /L
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## PLANT FOOD

### Legumes

Peanut	⊙	Ara h 1	7/8S Globulin	≤ 0.10
	⊙	Ara h 2	2S Albumin	≤ 0.10
	⊙	Ara h 3	11S Globulin	≤ 0.10
	⊙	Ara h 6	2S Albumin	0.10
	⊙	Ara h 8	PR-10	≤ 0.10
	⊙	Ara h 9	nsLTP	≤ 0.10
	⊙	Ara h 15	Oleosin	≤ 0.10
Chickpea	⊙	Cic a		≤ 0.10
Soy	⊙	Gly m 4	PR-10	≤ 0.10
	⊙	Gly m 5	7/8S Globulin	≤ 0.10
	⊙	Gly m 6	11S Globulin	≤ 0.10
	⊙	Gly m 8	2S Albumin	≤ 0.10
Lentil	⊙	Len c		≤ 0.10
White bean	⊙	Pha v		≤ 0.10
Pea	⊙	Pis s		≤ 0.10

### Cereals

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

Name	E/M	Allergen	Function	kU <sub>A</sub> /L
<b>Spices</b>				
Paprika	●●●●	Cap a		≤ 0.10
Caraway	●●●●	Car c		≤ 0.10
Oregano	●●●●	Ori v		≤ 0.10
Parsley	●●●●	Pet c		≤ 0.10
Anise	●●●●	Pim a		≤ 0.10
Mustard	●●●●	Sin		≤ 0.10
	⦿	Sin a 1	2S Albumin	≤ 0.10
<b>Fruits</b>				
Kiwi	⦿	Act d 1	Cysteine protease	≤ 0.10
	⦿	Act d 2	TLP	≤ 0.10
	⦿	Act d 5	Kiwellin	≤ 0.10
	⦿	Act d 10	nsLTP	≤ 0.10
Papaya	●●●●	Car p		≤ 0.10
Orange	●●●●	Cit s		≤ 0.10
Melon	⦿	Cuc m 2	Profilin	≤ 0.10
Fig	●●●●	Fic c		≤ 0.10
Strawberry	⦿	Fra a 1+3	PR-10+LTP	≤ 0.10
Apple	⦿	Mal d 1	PR-10	≤ 0.10
	⦿	Mal d 2	TLP	≤ 0.10
	⦿	Mal d 3	nsLTP	≤ 0.10
Mango	●●●●	Man i		≤ 0.10
Banana	●●●●	Mus a		≤ 0.10
Avocado	●●●●	Pers a		≤ 0.10
Cherry	●●●●	Pru av		≤ 0.10
Peach	⦿	Pru p 3	nsLTP	≤ 0.10
Pear	●●●●	Pyr c		≤ 0.10
Blueberry	●●●●	Vac m		≤ 0.10
Grapes	⦿	Vit v 1	nsLTP	≤ 0.10
<b>Vegetables</b>				
Onion	●●●●	All c		≤ 0.10
Garlic	●●●●	All s		≤ 0.10
Celery	⦿	Api g 1	PR-10	≤ 0.10

Name	E/M	Allergen	Function	kU <sub>A</sub> /L
	⊙	Api g 2	nsLTP	≤ 0.10
	⊙	Api g 6	nsLTP	≤ 0.10
Carrot	⦿	Dau c		≤ 0.10
	⊙	Dau c 1	PR-10	≤ 0.10
Potato	⦿	Sol t		≤ 0.10
Tomato	⦿	Sola l		≤ 0.10
	⊙	Sola l 6	nsLTP	≤ 0.10

### Nuts

Cashew	⦿	Ana o		≤ 0.10
	⊙	Ana o 2	11S Globulin	≤ 0.10
	⊙	Ana o 3	2S Albumin	≤ 0.10
Brazil nut	⦿	Ber e		≤ 0.10
	⊙	Ber e 1	2S Albumin	≤ 0.10
Pecan	⦿	Car i		14.92
Hazelnut	⊙	Cor a 1.0401	PR-10	≤ 0.10
	⊙	Cor a 8	nsLTP	≤ 0.10
	⊙	Cor a 9	11S Globulin	0.38
	⊙	Cor a 11	7/8S Globulin	0.57
	⊙	Cor a 14	2S Albumin	17.51
Walnut	⊙	Jug r 1	2S Albumin	≥ 50.00
	⊙	Jug r 2	7/8S Globulin	6.94
	⊙	Jug r 3	nsLTP	≤ 0.10
	⊙	Jug r 4	11S Globulin	10.06
	⊙	Jug r 6	7/8S Globulin	10.90
Macadamia	⊙	Mac i 2S Albumin	2S Albumin	6.06
	⦿	Mac inte		8.04
Pistachio	⊙	Pis v 1	2S Albumin	0.21
	⊙	Pis v 2	11S Globulin subunit	≤ 0.10
	⊙	Pis v 3	7/8S Globulin	≤ 0.10
Almond	⦿	Pru du		≤ 0.10

### Seed

Pumpkin seed	⦿	Cuc p		≤ 0.10
Sunflower seed	⦿	Hel a		≤ 0.10
Poppy seed	⦿	Pap s		0.13



Name	E/M	Allergen	Function	kU <sub>A</sub> /L
Sesame	⊙	Pap s 2S Albumin	2S Albumin	≤ 0.10
	⊙	Ses i		≤ 0.10
Fenugreek seeds	⊙	Ses i 1	2S Albumin	≤ 0.10
	⊙	Tri fo		≤ 0.10

## ANIMAL FOOD

### Milk

Cow, milk	⊙	Bos d_milk		≤ 0.10
	⊙	Bos d 4	α-Lactalbumin	≤ 0.10
	⊙	Bos d 5	β-Lactoglobulin	≤ 0.10
	⊙	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		≤ 0.10
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	≤ 0.10

### Seafood

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

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

## Meat

House cricket	⊙	Ach d		≤ 0.10
Cattle, meat	⊙	Bos d_meat		≤ 0.10
	⊙	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		≤ 0.10
Rabbit, meat	⊙	Ory_meat		≤ 0.10
Sheep, meat	⊙	Ovi a_meat		≤ 0.10
Pork	⊙	Sus d_meat		≤ 0.10
	⊙	Sus d 1	Serum Albumin	≤ 0.10
Mealworm	⊙	Ten m		≤ 0.10

Name	E/M	Allergen	Function	kU <sub>A</sub> /L
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## INSECTS & VENOMS

### Fire ant poison

Fire ant	••••	Sol spp.		≤ 0.10
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### Honey Bee Venom

Honey bee	••••	Api m		≤ 0.10
	⊙	Api m 1	Phospholipase A2	≤ 0.10
	⊙	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	⊙	Bla g 1	Cockroach Group 1	≤ 0.10
	⊙	Bla g 2	Aspartyl protease	≤ 0.10
	⊙	Bla g 4	Lipocalin	≤ 0.10
	⊙	Bla g 5	Glutathione S-transferase	≤ 0.10
	⊙	Bla g 9	Arginine kinase	≤ 0.10
American Cockroach	••••	Per a		≤ 0.10
	⊙	Per a 7	Tropomyosin	0.12

## ANIMAL ORIGIN

### Pet

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

Name	E/M	Allergen	Function	kU <sub>A</sub> /L
	⊙	Can f 4	Lipocalin	≤ 0.10
	⊙	Can f 6	Lipocalin	≤ 0.10
Guinea pig	⊙	Cav p 1	Lipocalin	≤ 0.10
Cat	⊙	Fel d 1	Uteroglobin	0.13
	⊙	Fel d 2	Serum Albumin	≤ 0.10
	⊙	Fel d 4	Lipocalin	≤ 0.10
	⊙	Fel d 7	Lipocalin	≤ 0.10
House mouse	⊙	Mus m 1	Lipocalin	≤ 0.10
Rabbit, epithel	⊙	Ory c 1	Lipocalin	≤ 0.10
	⊙	Ory c 2	Lipophilin	≤ 0.10
	⊙	Ory c 3	Uteroglobin	≤ 0.10
Djungarian hamster	⊙	Phod s 1	Lipocalin	≤ 0.10
Rat	⦿	Rat n		≤ 0.10

## Farm Animals

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

## OTHERS

### Latex

Latex	⊙	Hev b 1	Rubber elongation factor	≤ 0.10
	⊙	Hev b 3	Small rubber particle protein	≤ 0.10
	⊙	Hev b 5	unknown	≤ 0.10
	⊙	Hev b 6.02	Hevein	≤ 0.10
	⊙	Hev b 8	Profilin	≤ 0.10
	⊙	Hev b 11	Class 1 Chitinase	≤ 0.10

### Ficus

Weeping fig	⦿	Fic b		≤ 0.10
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Name	E/M	Allergen	Function	kU <sub>A</sub> /L
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## CCD

Hom s Lactoferrin	⊙	Hom s LF	CCD	≤ 0.10
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## Parasite

Pigeon tick	⊙	Arg r 1	Lipocalin	≤ 0.10
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**Total IgE result: 1708 kU/L**

**Reference range total-IgE**

**Adults: < 100 kU/L**

PRINTED ON  
06/02/2024

## 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.

### 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.

# Number of tested allergen sources:

165



**GRASS POLLEN** 6  
Bahia grass, Bermuda grass, Common reed, Perennial ryegrass, Rye, Timothy grass



**COCKROACH** 2  
American cockroach, German cockroach



**TREE POLLEN** 19  
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



**INSECT VENOMS** 5  
Common wasp venom, Fire ant venom, Honeybee venom, Long-headed wasp venom, Paper wasp venom



**WEED POLLEN** 10  
Annual mercury, Hemp, Lamb's quarter, Mugwort, Nettle, Pigweed, Ragweed, Ribwort, Russian thistle, Wall pellitory



**FUNGAL SPORES & YEAST** 6  
Alternaria alternata, Aspergillus fumigatus, Baker's yeast, Cladosporium herbarum, Malassezia sympodialis, Penicillium chrysogenum



**HOUSE DUST MITES & STORAGE MITES** 7  
Acarus siro, American house dust mite, Blomia tropicalis, European house dust mite, Glycyphagus domesticus, Lepidoglyphus destructor, Tyrophagus putrescentiae



**MILK** 5  
Camel's milk, Cow's milk, Goat's milk, Mare's milk, Sheep's milk



**LEGUMES** 6  
Chickpea, White bean, Lentil, Pea, Peanut, Soy



**EGG** 2  
Egg white, Egg yolk



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



**FISH & SEAFOOD** 20  
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



**SPICES** 6  
Anise, Caraway, Mustard, Oregano, Paprika, Parsley



**MEAT** 10  
Beef, Chicken, Horse, House cricket, Lamb, Mealworm, Migratory locust, Pig, Rabbit, Turkey



**FRUITS** 15  
Avocado, Apple, Banana, Blueberry, Cherry, Fig, Grape, Kiwi, Mango, Muskmelon, Orange, Papaya, Peach, Pear, Strawberry



**PETS** 7  
Cat, Djungarian hamster, Dog, Guinea pig, Mouse, Rabbit, Rat



**VEGETABLES** 6  
Carrot, Celery, Garlic, Onion, Potato, Tomato



**FARM ANIMALS** 5  
Cattle, Goat, Horse, Pig, Sheep



**NUTS & SEEDS** 13  
Almond, Brazil nut, Cashew, Hazelnut, Macadamia, Pecan, Pistachio, Walnut, Fenugreek seeds, Poppy seed, Pumpkin seed, Sesame, Sunflower seed



**OTHERS** 4  
Latex, Hom s lactoferrin, Pigeon tick, Weeping fig

# Raven Interpretation Summary

## Sample Information

The sample was tested on ALEX<sup>2</sup> Barcode 02BGZ0F6, interpretation date 19/01/2024.

Of the tested 295 allergens, 19 were/was above the cut off of 0.3 kU<sub>A</sub>/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: 1708 kU/L

The measured total IgE was 1708 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: Cor a 9, Cor a 11, Cor a 14, Jug r 1, Jug r 2, Jug r 4, Jug r 6, Mac i 2S Albumin

### 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.

## 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, 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).

## 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 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).

### Macadamia

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

Mac i 2S Albumin is a storage protein (2S Albumin) associated with clinical reactions up to anaphylaxis. The degree of cross-reactivity between storage proteins from macadamia 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. Mac i 2S Albumin 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).

### 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).

### 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).

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.