

PATIENT ID



PATIENT NAME



Test, test

DATE OF BIRTH



2/2/2000

SAMPLE ID



3563870

QR-CODE



02APD1CC

TESTED ALLERGENS



295

TEST METHOD



ALEX<sup>2</sup>

REFERRING PHYSICIAN

Alan Sara, MD

## Lab report: Summary on detectable sensitizations

### 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	Protein Family	kUA/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	0.53	
Bahia grass		Pas n		≤ 0.10	
Timothy grass		Phl p 1	Beta-Expansin	1.57	
		Phl p 2	Expansin	≤ 0.10	
		Phl p 5.0101	Grass Group 5/6	6.95	
		Phl p 6	Grass Group 5/6	49.46	
		Phl p 7	Polcalcin	≤ 0.10	
Timothy grass		Phl p 12	Profilin	≤ 0.10	
		Phr c		≤ 0.10	
Common reed		Phr c		≤ 0.10	
Cultivated rye, Pollen		Sec c_pollen		0.29	

### 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	2.83	
Cypress		Cup a 1	Pectate Lyase	1.30	
		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	

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L
Mulberry	●●●●	Mor r		≤ 0.10 ●●●●
Olive	●	Ole e 1	Ole e 1-Family	≤ 0.10 ●●●●
	●	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 Methylsterase	≤ 0.10 ●●●●
Nettle	●●●●	Urt d		≤ 0.10 ●●●●

### MITES

#### House Dust Mite

American house dust mite	●	Der f 1	Cysteine protease	≤ 0.10 ●●●●
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●●●● Allergen Extract

● Molecular Allergen

IgE < 0.3 negative or uncertain

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L
European house dust mite	⊙	Der f 2	NPC2 Family	≤ 0.10
	⊙	Der p 1	Cysteine protease	≤ 0.10
	⊙	Der p 2	NPC2 Family	≤ 0.10
	⊙	Der p 5	unknown	≤ 0.10
	⊙	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	≤ 0.10
	⊙	Der p 23	Peritrophin-like protein domain	≤ 0.10

### Storage Mite

Acarus siro	⊙	Aca s		≤ 0.10
Blomia tropicalis	⊙	Blo t 5	Mites, Group 5	≤ 0.10
	⊙	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	2.03
Aspergillus fumigatus	⊙	Asp f 1	Mitogillin Family	≤ 0.10
	⊙	Asp f 3	Peroxisomal Protein	≤ 0.10
	⊙	Asp f 4	unknown	≤ 0.10

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L	
Cladosporium herbarum		Asp f 6	Mn Superoxid-Dismutase	≤ 0.10	
		Cla h		0.12	
Penicilium chrysogenum		Cla h 8	Short Chain Dehydrogenase	≤ 0.10	
		Pen ch		≤ 0.10	

## 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	

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L
Wheat		Tri a aA_T1	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

### Spices

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

### Fruit

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		0.22
Avocado		Pers a		≤ 0.10
Cherry		Pru av		≤ 0.10
Peach		Pru p 3	nsLTP	≤ 0.10

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L
Pear		Pyr c		≤ 0.10
Blueberry		Vac m		≤ 0.10
Grapes		Vit v 1	nsLTP	≤ 0.10

### Vegetables

Onion		All c		≤ 0.10
Garlic		All s		≤ 0.10
Celery		Api g 1	PR-10	≤ 0.10
		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		≤ 0.10
Hazelnut		Cor a 1.0401	PR-10	≤ 0.10
		Cor a 8	nsLTP	≤ 0.10
		Cor a 9	11S Globulin	≤ 0.10
		Cor a 11	7/8S Globulin	≤ 0.10
		Cor a 14	2S Albumin	≤ 0.10
Walnut		Jug r 1	2S Albumin	≤ 0.10
		Jug r 2	7/8S Globulin	≤ 0.10
		Jug r 3	nsLTP	≤ 0.10
		Jug r 4	11S Globulin	≤ 0.10
		Jug r 6	7/8S Globulin	≤ 0.10
Macadamia		Mac i 2S Albumin	2S Albumin	≤ 0.10
		Mac inte		≤ 0.10

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L
Pistachio		Pis v 1	2S Albumin	≤ 0.10
		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		≤ 0.10
		Pap s 2S Albumin	2S Albumin	≤ 0.10
Sesame		Ses i		≤ 0.10
		Ses i 1	2S Albumin	0.26
Fenugreek seeds		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



Name	E/M	Allergen	Protein Family		kU <sub>A</sub> /L
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	
		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		0.12	
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	

Name	E/M	Allergen	Protein Family	kUA/L
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**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	

**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**

Allergen Extract

Molecular Allergen

IgE < 0.3 negative or uncertain

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L	
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	≤ 0.10	● ● ● ●

## ANIMAL ORIGIN

### Pet

Dog	⊙	Can f_Fd1	Uteroglobin	0.22	● ● ● ●
Male dog urine (incl. Can f 5)	● ● ● ●	Can f_male urine		3.38	● ● ● ●
Dog	⊙	Can f 1	Lipocalin	1.78	● ● ● ●
	⊙	Can f 2	Lipocalin	≤ 0.10	● ● ● ●
	⊙	Can f 3	Serum Albumin	≤ 0.10	● ● ● ●
	⊙	Can f 4	Lipocalin	6.00	● ● ● ●
	⊙	Can f 6	Lipocalin	0.59	● ● ● ●
Guinea pig	⊙	Cav p 1	Lipocalin	2.74	● ● ● ●
Cat	⊙	Fel d 1	Uteroglobin	5.93	● ● ● ●
	⊙	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	0.32	● ● ● ●
Rabbit, epithel	⊙	Ory c 1	Lipocalin	≤ 0.10	● ● ● ●
	⊙	Ory c 2	Lipophilin	≤ 0.10	● ● ● ●
	⊙	Ory c 3	Uteroglobin	0.14	● ● ● ●
Djungarian hamster	⊙	Phod s 1	Lipocalin	≤ 0.10	● ● ● ●
Rat	● ● ● ●	Rat n		0.49	● ● ● ●

### 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	● ● ● ●

Name	E/M	Allergen	Protein Family	kU <sub>A</sub> /L
	⊙	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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### 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: 74 kU/L**

#### Normal Total-IgE

**Adults:** < 20 kU/L Allergy unlikely, 20 - 100 kU/L Allergy possible, > 100 kU/L Allergy likely

SAMPLED ON

6/11/2022

ASSAY PERFORMED ON

6/11/2022

APPROVED ON

7/21/2022

## Information to cross-reactive allergens

### 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.

### Uteroglobin

Uteroglobins show a limited degree of cross-reactivity.

Uteroglobins are generated in salivary glands and in the skin of some furry animals. Higher levels of sIgE against Uteroglobins were observed in children with asthma to cat.

# Number of tested allergen sources:

**165**



## GRASS POLLEN

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

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## COCKROACH

American cockroach, German cockroach

2



## 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

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## INSECT VENOMS

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

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## WEED POLLEN

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

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## FUNGAL SPORES & YEAST

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

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## HOUSE DUST MITES & STORAGE MITES

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

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## MILK

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

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## EGG

Egg white, Egg yolk

2



## LEGUMES

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

6



## 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

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## GRAINS

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

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## MEAT

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

10



## SPICES

Anise, Caraway, Mustard, Oregano, Paprika, Parsley

6



## PETS

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

7



## FRUITS

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

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## FARM ANIMALS

Cattle, Goat, Horse, Pig, Sheep

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## VEGETABLES

Carrot, Celery, Garlic, Onion, Potato, Tomato

6



## OTHERS

Latex, Hom s lactoferrin, Pigeon tick, Weeping fig

4



## NUTS & SEEDS

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

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**RAVEN**<sup>®</sup>  
INTERPRETATION GUIDANCE SOFTWARE

## Interpretation - Support

### Raven Interpretation Summary

#### Sample Information

The sample was tested on ALEX<sup>2</sup> Barcode 02APD1CC, interpretation date 7/21/2022.

Of the tested 295 allergens, 15 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: 74 kU/L

The measured total IgE was 74 kU/L. With a total IgE titre of below 100 kU/L, allergy is possible but unlikely.

#### 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:

- Lipocalins: Can f 1, Can f 4, Can f 6, Cav p 1, Mus m 1

#### 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

##### Cypress Family

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

Cry j 1 is a member fo the Pectate Lyase allergen family. The degree of cross-reactivity between different cypress species based on Pectate Lyases is high. Cry j 1 serves as a marker for AIT indication, if corresponding clinical symptoms are present.

Cup a 1 is a member fo the Pectate Lyase allergen family. The degree of cross-reactivity between different cypress species based on Pectate Lyases is high. Cup 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 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 and Phl p 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: Lol p 1, Phl p 1.

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 not in all grass pollen species a Grass Group 5/6 allergen has been described. 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 Uteroglobulin (UG) allergen family and a marker for genuine cat allergy. Fel d 1 is 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).

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 5 is a member of the Arginine Esterase allergen family. It is a major allergen in male dogs only. Female and castrated dogs do not express Can f 5 in significant amounts. Also, patients sensitised to Can f 5 may react to human seminal fluid.

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.

### Guinea pig

Sensitisation to guinea pig was detected. Allergic symptoms associated with this allergen source range from allergic rhino-conjunctivitis to allergic asthma, especially when exposure is frequent.

Cav p 1 is a member of the Lipocalin allergen family. The degree of cross-reactivity to other members of this family is low.

AIT for causal treatment may not be available. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray). Avoidance is strongly recommended.

### Mouse

Sensitisation to mouse was detected. Allergic symptoms associated with this allergen source range from allergic rhino-conjunctivitis to allergic asthma, especially when exposure is frequent (e.g. in laboratory workers).

Mus m 1 is a member of the Lipocalin allergen family. The degree of cross-reactivity to other members of this family is low (Exception: Rat n 1 from rat).

AIT for causal treatment may not be available. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray). Avoidance is strongly recommended.

### Rat

Sensitisation to rat was detected. Allergic symptoms associated with rat range from allergic rhino-conjunctivitis to allergic asthma, especially when exposure is frequent (e.g. in laboratory workers).

AIT for causal treatment may not be available. Symptomatic treatment includes anti-histamines as well as local corticosteroids in various formulations (tablet, spray). Avoidance is strongly recommended.

## Moulds and Yeasts

### Alternaria alternata

Sensitisation to spores from *Alternaria alternata* was detected. Allergic symptoms associated with *A. alternata* range from allergic rhinoconjunctivitis to allergic asthma. *Alternaria alternata* is an outdoor fungal species.

Alt a 6 is a member of the Enolase allergen family. Cross-reactions occur between many different mould species based on allergens from the Enolase family.

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

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.