



**Provider:** Sample Report  
**Patient:**  
**Accession #:**  
**Collected:**

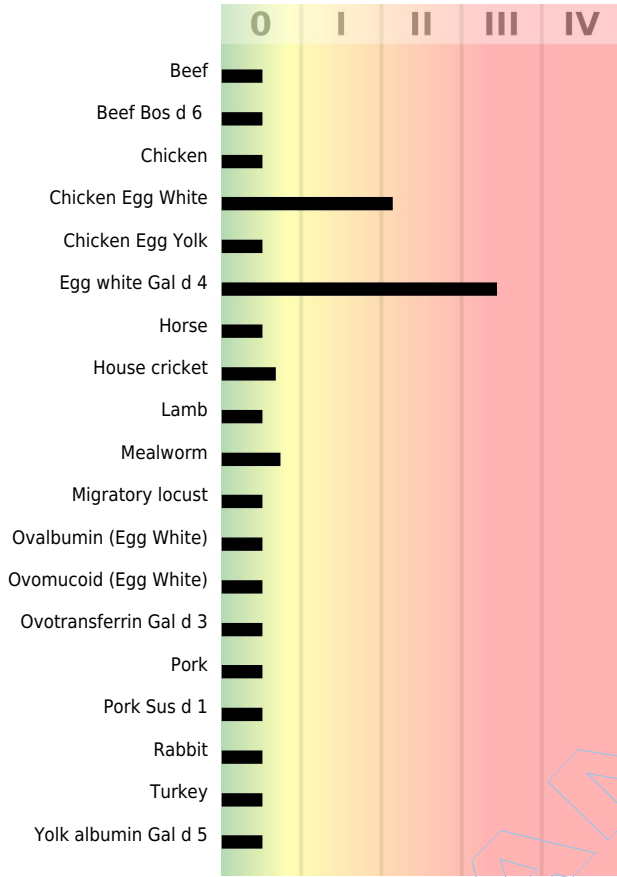
**Sex:**  
**Age:**  
**Received:**

**Sample Type:** Serum  
**Date of Birth:**  
**Completed:**

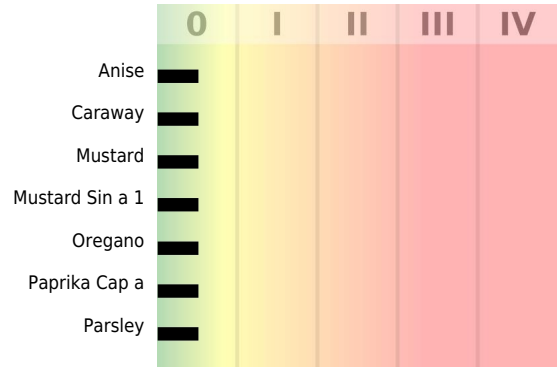
IgE ██████████

CLIA #: 50D0965661  
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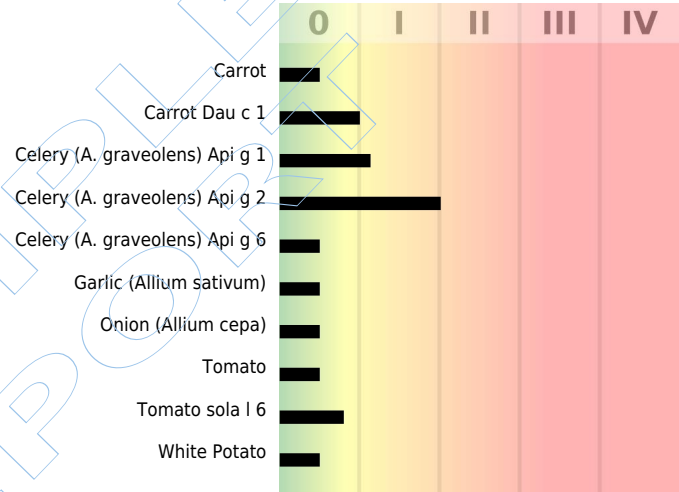
**Egg/Meat/Poultry**



**Spices**



**Vegetables**



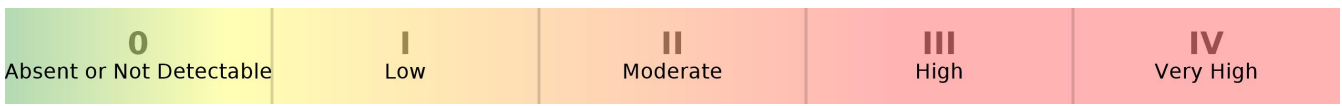
**Yeast**



**CCD Marker**



Semi-Quantitative Immunoassay (ELISA). The test performance characteristics were determined by US BioTek Laboratories, LLC. This test has not been cleared or approved by the US Food and Drug Administration (FDA). IgE test results should be used in conjunction with other relevant clinical information by healthcare providers to diagnose IgE-mediated allergic disorders.



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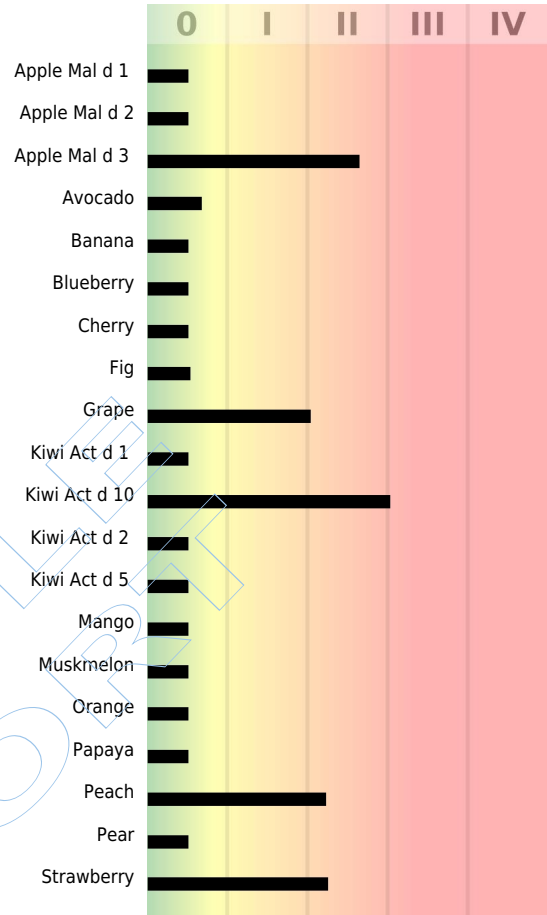
IgE ██████████

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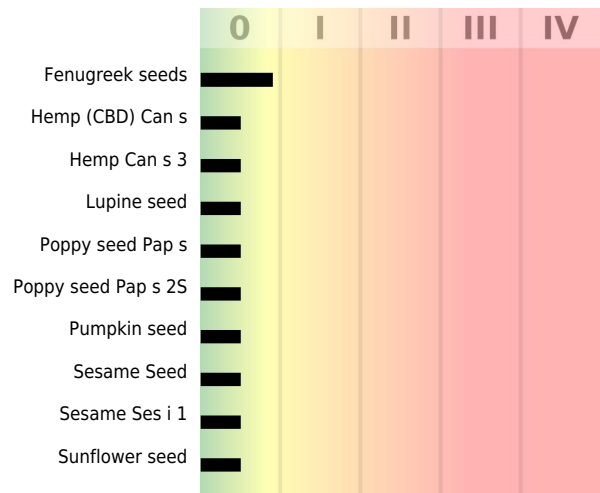
**Seafood**



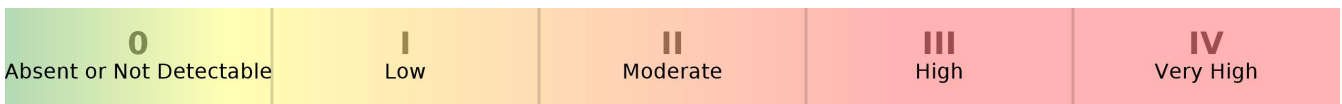
**Fruits**



**Seeds**



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**Completed:**

IgE

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### Grains & Legumes

Antigen Name	Analyte	Class	Value	Class Cut Off
Barley	IgE	Moderate	2.66 kU/L	1.0 - <5.0
Buckwheat (kasha)	IgE	High	8.89 kU/L	5.0 - <15.0
Buckwheat (kasha) Fag e 2	IgE	Absent	< 0.30 kU/L	<0.30
Chickpea	IgE	Absent	< 0.30 kU/L	<0.30
Corn	IgE	Moderate	3.84 kU/L	1.0 - <5.0
Corn Zea m 14	IgE	High	10.11 kU/L	5.0 - <15.0
Green Pea	IgE	Absent	< 0.30 kU/L	<0.30
Lentil	IgE	Absent	< 0.30 kU/L	<0.30
Millet	IgE	Moderate	1.34 kU/L	1.0 - <5.0
Oat	IgE	Moderate	2.20 kU/L	1.0 - <5.0
Quinoa	IgE	Absent	< 0.30 kU/L	<0.30
Rice	IgE	Absent	< 0.30 kU/L	<0.30
Rye	IgE	Moderate	3.91 kU/L	1.0 - <5.0
Soy Gly m 4	IgE	Absent	< 0.30 kU/L	<0.30
Soy Gly m 5	IgE	Absent	< 0.30 kU/L	<0.30
Soy Gly m 6	IgE	Absent	< 0.30 kU/L	<0.30
Soy Gly m 8	IgE	Absent	< 0.30 kU/L	<0.30
Spelt	IgE	Moderate	1.59 kU/L	1.0 - <5.0
Wheat Tri a 14	IgE	Absent	< 0.30 kU/L	<0.30
Wheat Tri a 19	IgE	Absent	< 0.30 kU/L	<0.30
Wheat Tri a aA_TI	IgE	Absent	< 0.30 kU/L	<0.30
White Bean Pha v	IgE	Absent	< 0.30 kU/L	<0.30

### Dairy

Antigen Name	Analyte	Class	Value	Class Cut Off
Alpha Lactalbumin	IgE	Absent	< 0.30 kU/L	<0.30
Beta Lactoglobulin	IgE	Absent	< 0.30 kU/L	<0.30
Camel's milk	IgE	Absent	< 0.30 kU/L	<0.30
Casein	IgE	Absent	< 0.30 kU/L	<0.30
Cow's Milk	IgE	Absent	< 0.30 kU/L	<0.30
Goat's milk	IgE	Absent	< 0.30 kU/L	<0.30
Mare's milk	IgE	Absent	< 0.30 kU/L	<0.30
Sheep's milk	IgE	Absent	< 0.30 kU/L	<0.30

### Nuts

Antigen Name	Analyte	Class	Value	Class Cut Off
Almond	IgE	Absent	< 0.30 kU/L	<0.30
Brazil Nut	IgE	Absent	< 0.30 kU/L	<0.30
Brazil nut Ber e 1	IgE	Absent	< 0.30 kU/L	<0.30
Cashew nut	IgE	Absent	< 0.30 kU/L	<0.30
Cashew nut Ana o 2	IgE	Absent	< 0.30 kU/L	<0.30
Cashew nut Ana o 3	IgE	Absent	< 0.30 kU/L	<0.30
Hazelnut Cor a 1.0401	IgE	Moderate	2.78 kU/L	1.0 - <5.0
Hazelnut Cor a 11	IgE	Absent	< 0.30 kU/L	<0.30
Hazelnut Cor a 14	IgE	Absent	< 0.30 kU/L	<0.30
Hazelnut Cor a 8	IgE	Moderate	3.46 kU/L	1.0 - <5.0
Hazelnut Cor a 9	IgE	Absent	< 0.30 kU/L	<0.30
Macadamia nut	IgE	Absent	< 0.30 kU/L	<0.30
Macadamia nut Mac i 2S	IgE	Absent	< 0.30 kU/L	<0.30
Peanut Ara h 1	IgE	Absent	< 0.30 kU/L	<0.30
Peanut Ara h 15	IgE	Absent	< 0.30 kU/L	<0.30
Peanut Ara h 2	IgE	Absent	< 0.30 kU/L	<0.30
Peanut Ara h 3	IgE	Absent	< 0.30 kU/L	<0.30
Peanut Ara h 6	IgE	Absent	< 0.30 kU/L	<0.30
Peanut Ara h 8	IgE	Absent	< 0.30 kU/L	<0.30
Peanut Ara h 9	IgE	Moderate	4.26 kU/L	1.0 - <5.0
Pecan	IgE	Absent	< 0.30 kU/L	<0.30
Pistachio Pis v 1	IgE	Absent	< 0.30 kU/L	<0.30
Pistachio Pis v 2	IgE	Absent	< 0.30 kU/L	<0.30
Pistachio Pis v 3	IgE	Low	0.73 kU/L	0.30 - <1.0

### Nuts (Continued)

Antigen Name	Analyte	Class	Value	Class Cut Off
Walnut Jug r 1	IgE	Absent	< 0.30 kU/L	<0.30
Walnut Jug r 2	IgE	Absent	< 0.30 kU/L	<0.30
Walnut Jug r 3	IgE	Low	0.52 kU/L	0.30 - <1.0
Walnut Jug r 4	IgE	Absent	< 0.30 kU/L	<0.30
Walnut Jug r 6	IgE	Absent	< 0.30 kU/L	<0.30

### Egg/Meat/Poultry

Antigen Name	Analyte	Class	Value	Class Cut Off
Beef	IgE	Absent	< 0.30 kU/L	<0.30
Beef Bos d 6	IgE	Absent	< 0.30 kU/L	<0.30
Chicken	IgE	Absent	< 0.30 kU/L	<0.30
Chicken Egg White	IgE	Moderate	1.51 kU/L	1.0 - <5.0
Chicken Egg Yolk	IgE	Absent	< 0.30 kU/L	<0.30
Egg white Gal d 4	IgE	High	9.40 kU/L	5.0 - <15.0
Horse	IgE	Absent	< 0.30 kU/L	<0.30
House cricket	IgE	Absent	< 0.30 kU/L	<0.30
Lamb	IgE	Absent	< 0.30 kU/L	<0.30
Mealworm	IgE	Absent	< 0.30 kU/L	<0.30
Migratory locust	IgE	Absent	< 0.30 kU/L	<0.30
Ovalbumin (Egg White)	IgE	Absent	< 0.30 kU/L	<0.30
Ovomucoid (Egg White)	IgE	Absent	< 0.30 kU/L	<0.30
Ovotransferrin Gal d 3	IgE	Absent	< 0.30 kU/L	<0.30
Pork	IgE	Absent	< 0.30 kU/L	<0.30
Pork Sus d 1	IgE	Absent	< 0.30 kU/L	<0.30
Rabbit	IgE	Absent	< 0.30 kU/L	<0.30
Turkey	IgE	Absent	< 0.30 kU/L	<0.30
Yolk albumin Gal d 5	IgE	Absent	< 0.30 kU/L	<0.30

### Yeast

Antigen Name	Analyte	Class	Value	Class Cut Off
Baker's Yeast (Saccharomyces cerevisiae)	IgE	Absent	< 0.30 kU/L	<0.30

### Spices

Antigen Name	Analyte	Class	Value	Class Cut Off
Anise	IgE	Absent	< 0.30 kU/L	<0.30
Caraway	IgE	Absent	< 0.30 kU/L	<0.30
Mustard	IgE	Absent	< 0.30 kU/L	<0.30
Mustard Sin a 1	IgE	Absent	< 0.30 kU/L	<0.30
Oregano	IgE	Absent	< 0.30 kU/L	<0.30
Paprika Cap a	IgE	Absent	< 0.30 kU/L	<0.30
Parsley	IgE	Absent	< 0.30 kU/L	<0.30

### Vegetables

Antigen Name	Analyte	Class	Value	Class Cut Off
Carrot	IgE	Absent	< 0.30 kU/L	<0.30
Carrot Dau c 1	IgE	Low	0.30 kU/L	0.30 - <1.0
Celery (A. graveolens) Api g 1	IgE	Low	0.39 kU/L	0.30 - <1.0
Celery (A. graveolens) Api g 2	IgE	Moderate	1.03 kU/L	1.0 - <5.0
Celery (A. graveolens) Api g 6	IgE	Absent	< 0.30 kU/L	<0.30
Garlic (Allium sativum)	IgE	Absent	< 0.30 kU/L	<0.30
Onion (Allium cepa)	IgE	Absent	< 0.30 kU/L	<0.30
Tomato	IgE	Absent	< 0.30 kU/L	<0.30
Tomato sola l 6	IgE	Absent	< 0.30 kU/L	<0.30
White Potato	IgE	Absent	< 0.30 kU/L	<0.30

### CCD Marker

Antigen Name	Analyte	Class	Value	Class Cut Off
CCD (Hom s lactoferrin) Hom s LF	IgE	Absent	< 0.30 kU/L	<0.30

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IgE

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### Seafood

Antigen Name	Analyte	Class	Value	Class Cut Off
A. simplex (parasite) Ani s 1	IgE	Absent	< 0.30 kU/L	<0.30
A. simplex (parasite) Ani s 3	IgE	Absent	< 0.30 kU/L	<0.30
Atlantic cod Gad m 1	IgE	Absent	< 0.30 kU/L	<0.30
Atlantic cod Gad m 2&3	IgE	Absent	< 0.30 kU/L	<0.30
Atlantic herring	IgE	Absent	< 0.30 kU/L	<0.30
Atlantic herring Clu h 1	IgE	Absent	< 0.30 kU/L	<0.30
Atlantic mackerel	IgE	Absent	< 0.30 kU/L	<0.30
Atlantic mackerel Sco s 1	IgE	Absent	< 0.30 kU/L	<0.30
Atlantic salmon Sal s 1	IgE	Absent	< 0.30 kU/L	<0.30
Black Tiger shrimp Pen m 1	IgE	Absent	< 0.30 kU/L	<0.30
Black Tiger shrimp Pen m 2	IgE	Absent	< 0.30 kU/L	<0.30
Black Tiger shrimp Pen m 3	IgE	Absent	< 0.30 kU/L	<0.30
Black Tiger shrimp Pen m 4	IgE	Absent	< 0.30 kU/L	<0.30
Blue Mussel	IgE	Absent	< 0.30 kU/L	<0.30
Brown shrimp	IgE	Absent	< 0.30 kU/L	<0.30
Carp	IgE	Absent	< 0.30 kU/L	<0.30
Clam	IgE	Absent	< 0.30 kU/L	<0.30
Cod	IgE	Absent	< 0.30 kU/L	<0.30
Crab	IgE	Absent	< 0.30 kU/L	<0.30
Lobster	IgE	Absent	< 0.30 kU/L	<0.30
Northern prawn	IgE	Absent	< 0.30 kU/L	<0.30
Oyster	IgE	Absent	< 0.30 kU/L	<0.30
Salmon	IgE	Absent	< 0.30 kU/L	<0.30
Scallop	IgE	Absent	< 0.30 kU/L	<0.30
Shrimp	IgE	Absent	< 0.30 kU/L	<0.30
Squid	IgE	Absent	< 0.30 kU/L	<0.30
Swordfish	IgE	Absent	< 0.30 kU/L	<0.30
Thornback ray Raj c parvalbumin	IgE	Absent	< 0.30 kU/L	<0.30
Thornback ray	IgE	Absent	< 0.30 kU/L	<0.30
Tuna	IgE	Absent	< 0.30 kU/L	<0.30
Tuna Thu a 1	IgE	Absent	< 0.30 kU/L	<0.30

### Seeds (Continued)

Antigen Name	Analyte	Class	Value	Class Cut Off
Hemp Can s 3	IgE	Absent	< 0.30 kU/L	<0.30
Lupine seed	IgE	Absent	< 0.30 kU/L	<0.30
Poppy seed Pap s	IgE	Absent	< 0.30 kU/L	<0.30
Poppy seed Pap s 2S	IgE	Absent	< 0.30 kU/L	<0.30
Pumpkin seed	IgE	Absent	< 0.30 kU/L	<0.30
Sesame Seed	IgE	Absent	< 0.30 kU/L	<0.30
Sesame Ses i 1	IgE	Absent	< 0.30 kU/L	<0.30
Sunflower seed	IgE	Absent	< 0.30 kU/L	<0.30

### Fruits

Antigen Name	Analyte	Class	Value	Class Cut Off
Apple Mal d 1	IgE	Absent	< 0.30 kU/L	<0.30
Apple Mal d 2	IgE	Absent	< 0.30 kU/L	<0.30
Apple Mal d 3	IgE	Moderate	3.55 kU/L	1.0 - <5.0
Avocado	IgE	Absent	< 0.30 kU/L	<0.30
Banana	IgE	Absent	< 0.30 kU/L	<0.30
Blueberry	IgE	Absent	< 0.30 kU/L	<0.30
Cherry	IgE	Absent	< 0.30 kU/L	<0.30
Fig	IgE	Absent	< 0.30 kU/L	<0.30
Grape	IgE	Moderate	1.12 kU/L	1.0 - <5.0
Kiwi Act d 1	IgE	Absent	< 0.30 kU/L	<0.30
Kiwi Act d 10	IgE	High	5.30 kU/L	5.0 - <15.0
Kiwi Act d 2	IgE	Absent	< 0.30 kU/L	<0.30
Kiwi Act d 5	IgE	Absent	< 0.30 kU/L	<0.30
Mango	IgE	Absent	< 0.30 kU/L	<0.30
Muskmelon	IgE	Absent	< 0.30 kU/L	<0.30
Orange	IgE	Absent	< 0.30 kU/L	<0.30
Papaya	IgE	Absent	< 0.30 kU/L	<0.30
Peach	IgE	Moderate	1.86 kU/L	1.0 - <5.0
Pear	IgE	Absent	< 0.30 kU/L	<0.30
Strawberry	IgE	Moderate	2.00 kU/L	1.0 - <5.0

### Seeds

Antigen Name	Analyte	Class	Value	Class Cut Off
Fenugreek seeds	IgE	Absent	< 0.30 kU/L	<0.30
Hemp (CBD) Can s	IgE	Absent	< 0.30 kU/L	<0.30

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IgE [REDACTED]

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Higher levels of IgE have been associated with increased allergic reactivity. However, higher levels of IgE may or may not present with expected symptoms of allergy if there are also higher levels of IgG4 for the same antigen. IgG4 is considered an IgE "blocking antibody", and a rise in IgG4 levels has been associated with successful desensitization therapy in human studies. IgG4 testing may further guide clinical patient management.

Carbohydrate cross-determinants (CCDs) may confound IgE and IgG results. CCDs are glycoprotein side-chains found primarily in plants and insects, and they are strongly cross-reactive to other similar plant and insect antigens. IgE antibodies can form against CCDs but have not been documented to contribute to allergic reactions in humans. A biomarker for CCD interference has been included on this test; The sample diluent in this test contains CCD inhibitor. The CCD inhibition efficiency is 85%. If the CCD marker is > 0.3 kU/mL, the CCDs may be confounding results.

CCD confounding generally raises the reaction class of plant-based antigens (most/all high), while animal-based antigens react as expected (mix of lows and highs). If CCD confounding is suspected, consider ordering the Anti-CCD absorbant follow-up test, which can bind the CCDs in the serum so that clinically relevant IgE reactivity can be evaluated.

### References:

Altmann F. Coping with cross-reactive carbohydrate determinants in allergy diagnosis. *Allergo J Int.* 2016;25(4):98-105.

Bianchini R, Karagiannis SN, Jordakieva G, Jensen-Jarolim E. The Role of IgG4 in the Fine Tuning of Tolerance in IgE-Mediated Allergy and Cancer. *Int J Mol Sci.* 2020 Jul 16;21(14):5017.

Celik-Bilgili S, Mehl A, Verstege A, Staden U, Nocon M, Beyer K, Niggemann B. The predictive value of specific immunoglobulin E levels in serum for the outcome of oral food challenges. *Clin Exp Allergy.* 2005 Mar;35(3):268-73.

Jin C, Hantusch B, Hemmer W, Stadlmann J, Altmann F. Affinity of IgE and IgG against cross-reactive carbohydrate determinants on plant and insect glycoproteins. *J Allergy Clin Immunol.* 2008 Jan;121(1):185-190.e2.

Stylianou E, Ueland T, Borchsenius F, Michelsen AE, Øvstebø R, Mollnes TE, Skjønberg OH, Aukrust P. Specific allergen immunotherapy: effect on IgE, IgG4 and chemokines in patients with allergic rhinitis. *Scand J Clin Lab Invest.* 2016;76(2):118-27

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