

IgG Food MAP with xMAP® Technology Now with Revolutionary Immunofluorescent Bead Technology

What Makes the IgG Food MAP a Superior Test?



Assesses 190 Foods

Includes a wide range of foods, common in the Western, Asian, and Mediterranean diets. We have added a hemp allergy marker because it is very common now as a food source or as medical CBD. We are able to run the IgG Food MAP on both serum and dried blood spot samples.



Upgraded Technology

Antigen-specific IgG antibodies are captured on multiplexed magnetic beads, using xMAP® (Multiple Analyte Profiling) technology. The xMAP® bead-based immunoassay allows for the simultaneous detection of IgG antibodies to all 190 foods in two single test wells, reducing sample volume requirements and reagents while increasing sensitivity and specificity as compared to traditional plate-based ELISA tests. The upgraded immunoassay is cost and time effective, easy to perform and reproducible. We have now fully automated all steps of our testing processes, leading to even better precision.



Greater Reliability of Results

In the multiplexed bead-based immunoassay, food antigenic proteins are first covalently bound to beads. The beads are mixed with the patient's sample where bead-bound antigens capture the specific IgG antibodies present in the sample. The food-specific IgG antibody level of each sample is detected with a fluorescent-labeled antibody against IgG. Every reaction with a patient sample also contains control beads to ensure accurate results. The fluorescent signal is measured using an xMAP® analyzer. The amount of food-specific antibody detected per allergen specific bead is directly proportional to the fluorescent signals. The higher the fluorescence, the more specific IgG antibodies are present in the sample. Once test results are available for review, our Quality Assurance (QA) team carefully verifies that quality control measures are within instrument and assay specifications.

	_
	1
_	J
	1
	×

Upgraded Sensitivity and Specificity

GPL's xMAP[®] immunoassay with fluorescence readout has proven to be even more sensitive than ELISA tests. The IgG Food MAP test detects all food antibodies with greater precision than ELISA tests thanks to the superior technology we've developed for the test.



Ecofriendly Technology

The xMAP® bead-based immunoassay is environmentally friendly, reducing plastic pollution. In the ELISA, a panel for 190 foods would require 190 wells (2 plates) per sample. In contrast, the beadbased platform only requires two wells per sample. In other words, the bead-based immunoassay would use just one plastic microtiter plate for testing 48 samples, while the ELISA would use 96 plates to test the same number of samples.



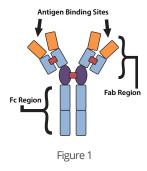
Tests for Specific Food Antigenic Proteins

GPL has upgraded from the ELISA's single analyte detection to multiple analyte detection. The multiplexed, bead-based assay only detects IgGs against food antigenic proteins that were covalently bound to the beads, making this assay more specific to proteins than the ELISA. In the ELISA, there is no covalent binding of proteins; instead, proteins or other antigens are bound to the surface of a plastic well by adsorption. This non-specificity of the surface allows the binding of glycan-rich molecules such as *Candida* and yeast. Because of this, GPL is providing a separate report for the yeasts which will be tested by ELISA, rather than the xMAP[®] immunoassay.

What is IgG?

IgG is the major antibody found in serum. IgGs are composed of two fragment antigen binding (Fab) regions that contain the antigen binding sites and the Fc region, which is responsible for most of the biologic activity of the antibodies (Figure 1). An antigen is a substance that causes the immune system to produce an antibody that specifically reacts with it. IgG-mediated reactions to food antigens may be delayed by several hours or days, whereas IgE food antibody reactions are quite immediate.

Human IgG is separated into four subclasses denoted IgG1 IgG2, IgG3, and IgG4. Each subclass varies in abundance and biological function. IgG1 and IgG3 are predominantly responsible for antibody protection against reinfection. IgG2 antibodies are opsonic (marking a pathogen for ingestion and destruction) and develop in response to carbohydrate polysaccharide antigens. IgG4 molecules function as skin-sensitizing immunoglobulins and are thought to block antibodies produced in response to chronic exposure to antigens.



Why Test IgG Sensitivities?

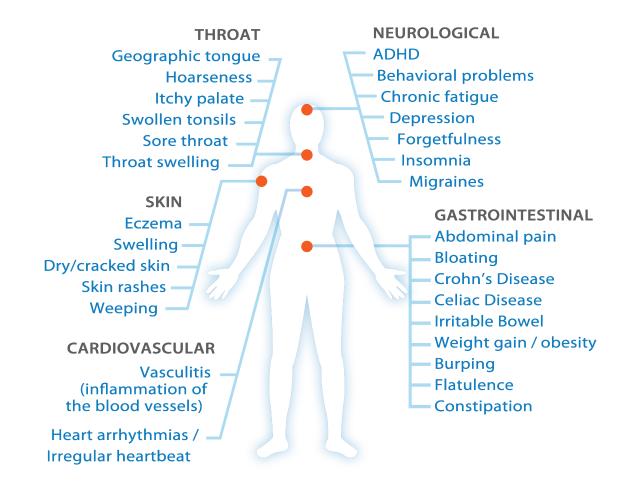
Immunoglobulin G (IgG) food testing is a useful guide for structuring elimination diets for patients with many chronic conditions. Individuals with neurological, gastrointestinal, movement, and behavioral disorders often suffer from IgG food sensitivities. People may continue to eat offending foods unaware of their potential adverse effects. Symptoms associated with food sensitivities may occur hours or days after the offending food was eaten because IgG food antibodies remain for a much longer time than IgE antibodies. IgE food allergy causes the release of histamine, producing an immediate hypersensitivity reaction. In contrast, IgG food sensitivity is triggered by the binding of complement to IgG food antigen complexes, causing an inflammatory response. This is a delayed hypersensitivity reaction in which symptoms appear anywhere from hours to days after eating the offending food. Elimination of IgG-positive foods may improve symptoms of irritable bowel syndrome, Autism Spectrum Disorders, AD(H)D, cystic fibrosis, rheumatoid arthritis, and epilepsy, according to numerous clinical studies.

Clinical Significance of IgG Testing

The clinical significance of IgG food testing was illustrated in an early article published by an otolaryngologist who reported that the majority of his patients had substantial health improvements after eliminating foods found positive by IgG food allergy testing. The study demonstrated a 71% success rate for all symptoms, achieving at least a 75% relief. Of particular interest was the group of patients with chronic, disabling symptoms, unresponsive to other intensive treatments. Symptoms most commonly improved (75%-100%) on the elimination diets included asthma, coughing, ringing in the ears, chronic fatigue, headaches, gas, bloating, diarrhea, skin rash and itching, and nasal congestion. The most common IgG food allergies were to cow's milk, garlic, mustard, egg yolk, tea, and chocolate. A recent study reported that 93% of non-celiac, gluten-sensitive patients showed anti-gliadin IgG antibody disappearance after a six-month adherence to a gluten-free diet. The IgG disappearance was closely related to a significant improvement of both gastrointestinal and extra-intestinal symptoms.

High IgG antibody levels have frequently been found in children with diabetes mellitus, Crohn's disease, celiac disease, and in those considered to be obese. IgG food test results are often used to develop food antibody-guided exclusion/ elimination diets. The implementation of such diets has been shown to alleviate symptoms associated with non-celiac gluten sensitivity and food sensitivity-induced atopic conditions, reduce the frequency of migraine headaches, decrease the occurrence of diarrhea, decrease failure-to-thrive among children with cystic fibrosis, reduce symptoms of irritable bowel syndrome, improve rectal compliance, decrease stool frequency in Crohn's disease, prevent seizures and hyperkinetic behavior in children with epilepsy, and ameliorate kidney function in glomerulonephritis. Food elimination diets also hold promise for the improvement of behaviors associated with attention-deficit hyperactivity disorder.

IgG Food MAP with xMAP® Technology



Significance of Total IgG Versus IgG4

The goal of IgG-mediated food allergy testing is to identify foods that are capable of triggering many adverse reactions. IgG1, IgG2, and IgG3 are all capable of causing inflammation. IgG1, IgG2, and IgG3 antibodies to food antigens form large immune complexes or lattices that activate complement proteins and increase inflammation. IgG4 antibodies to food antigens will not usually trigger inflammation because IgG4 antibodies do not bind complement. However high levels of these antibodies indicate the presence of immune reactions against food antigens. Similarly IgA antibodies are not as clinically significant due to their inability to bind complement and trigger inflammation.

While most laboratories only provide a measurement of IgG4 molecules, The Great Plains Laboratory provides a measurement of total IgG antibodies to various food-based antigens and *Candida*, a genus of yeast native to the GI tract. Testing for only IgG4 antibodies limits the ability of the clinician to identify those foods that may be causing significant clinical reactions in their patients. IgG4 antibodies usually represent less than 6% of the total IgG antibodies. The importance of measuring all subtypes of IgG antibodies is highlighted in an article by Kemeny et al. They found that IgG1 antibodies to gluten were elevated in all patients with celiac disease but none of the patients had elevated IgG4 antibodies to gluten.

The IgG and Candida Connection

The Great Plains Laboratory tests for *Candida albicans* (a microscopic fungal organism and pathogenic yeast) as part of IgG food allergy testing. High levels of IgG antibodies to Candida have been found in patients who reported many symptoms of yeast overgrowth. *Candida* problems are caused when the benign yeast form of *Candida albicans* transforms to its fungal form and produces a buildup of toxins in the body. *Candida* can overgrow areas of the intestinal

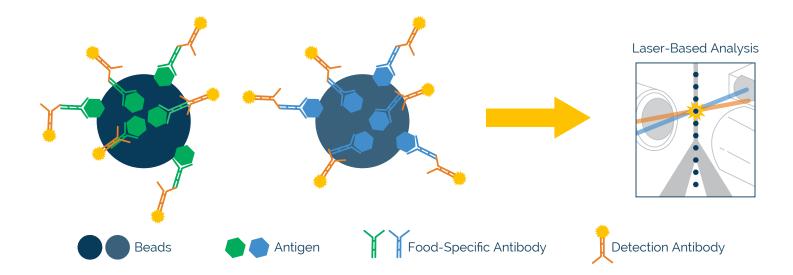
mucosa resulting in numerous symptoms, including creating microscopic holes in the lining of the intestines, leading to what is commonly known as "leaky gut" syndrome. *Candida albicans* proteins may trigger an inflammatory response. A wide range of disorders have been linked to *Candida* overgrowth including autism, multiple sclerosis, depression, chronic fatigue, fibromyalgia, migraines, and irritable bowel syndrome. Immunocompromised patients with cancer or AIDS can have life-threatening complications if *Candida* enters the bloodstream, resulting in systemic candidiasis. Use of antibiotics, oral contraceptives, chemotherapy, anti-inflammatory steroids, and diets high in sugar and starch increase susceptibility to *Candida* overgrowth.

Research has revealed a relationship between health of the gastrointestinal tract and overall well-being. Imbalance between good and bad bacteria (dysbiosis) has been shown to worsen behavior disorders, hyperactivity, aggression, and cause fatigue. Evidence is mounting that dysbiosis impairs the immune system and contributes to food allergies, digestive disorders, nutritional deficiencies, and cognitive dysfunction. Using the Food MAP (which will include a separate report for *Candida* and brewer's yeast) will help identify food allergies and *Candida* sensitivity that may be creating a variety of problems for patients. Practitioners may then recommend elimination of the identified foods and supplementation with various natural products that control *Candida* overgrowth and assist with healing of the gut. Depending on the levels of *Candida* and the severity of a patient's symptoms, further testing may be recommended, including a Comprehensive Stool Test or Organic Acids Test.

Multiple Analyte Profiling with xMAP® Technology

The bead-based immunofluorescent assay uses color-coded magnetic beads, which are covalently coupled to 190 different food proteins specific to each protein's IgG target. The color-coding of the beads into spectrally distinct sets allows the simultaneous capture and detection of multiple food IgG analytes from a single reaction well.

The xMAP[®] bead-based immunoassay occurs on the surface of magnetic beads by adding a patient's serum sample and observing the classic antigen/antibody interaction, detected by using a fluorescent labeled antibody. Laser-based analysis of the fluorescent signal response is proportional to the binding of food-specific IgG antibodies onto the beads.



IgG Food MAP with xMAP® Technology

Bamboo Shoot

Bean Sprout

Bell Pepper

Broccoli

Cabbage

Cauliflower

Chili Pepper

Enoki Mushroom

Cucumber

Eggplant

Garlic

Kale

Leek

Lettuce

Onion

Potato

Radish

Kelp

Spinach

Tomato

Yam

Yuca

Zucchini

Bay Leaf

Herbs/Spices

Basil

Pumpkin

Seaweed Kombu

Seaweed Wakame

Shitake Mushroom

Seaweed Nori

Sweet Potato

Yellow Squash

Lotus Root

Napa Cabbage

Olive (Green)

Portabella

Mushroom

Carrot

Celery

Bitter Gourd

Brussel Sprout

Burdock Root

Beet

Black Pepper

Cilantro

Cloves

Cumin

Curry

Ginger

Hops

Mint

Miso

Mustard Seed

Oregano

Rosemary

Tarragon

Turmeric

Miscellaneous

Bromelain

Coffee

Honey

Cane Sugar

Cocoa Bean

Green Tea

Meat glue

Oolong Tea

5

Vanilla Bean

Thyme

Paprika

Sage

Dill

Cinnamon

Cayenne Pepper

Analyte List (190 Foods + Candida and Saccharomyces Cerevisiae)

Dairy

- Beta-Lactoglobulin
- Casein
- Cheddar Cheese
- Cow's Milk
- Goat's Milk
- Mozzarella Cheese
- Sheep's Yogurt
- Whey
- Yogurt

Beans and Peas

- Adzuki Bean
- Black Bean
- Garbanzo Bean
- Green Bean
- Green Pea
- Kidney Bean
- Lentil
- Lima Bean
- Mung Bean
- Navy Bean
- Pinto Bean
- Soybean
- Tofu

Fruits

- Acai Berry
- Apple
- Apricot
- Banana
- Blueberry
- Cantaloupe
- Cherry
- Coconut
- Cranberry
- Date
- Grape
- Grapefruit
- Guava
- Jackfruit
- Kiwi
- Lemon
- Lychee
- Mango

Orange

- Papaya
- Passion Fruit
 - Peach
- Pear
- Pineapple Plum
- - Pomegranate
 - Raspberry
 - Strawberry Watermelon
 - Grains
 - Amaranth
 - Barley
 - **Buckwheat**
 - Corn
 - Gliadin
 - Malt
 - Millet
 - Oat
 - Ouinoa
 - Rice
 - Rye
 - Sorghum
 - Teff
 - Wheat Gluten
 - Whole Wheat

Fish/Seafood

- Abalone
- Anchovy
- Bass
 - Bonito
 - Codfish
 - Crab
- Halibut
- Jack Mackerel
- Lobster
- Octopus
- Oyster
- Pacific Mackerel (Saba)
- Pacific Saury
- Perch

- Red Snapper
- Salmon
- Sardine
- Scallop
 - Shrimp Small Clam
 - Squid
 - Tilapia
 - Trout
 - Tuna

Meat/Fowl

Beef

- Chicken
- Duck
- Egg White Egg Yolk

Goose

Lamb

Pork

Turkey

Nuts/Seeds

Almond

Brazil Nut

Cashew

Chestnut

Chia Seed

Flax Seed

Hazelnut

Peanut

Pecan

Pine Nut

Pistachio

Walnut

Artichoke

Asparagus

Avocado

Vegetables

Pumpkin Seed

Sesame Seed

Sunflower Seed

Hemp Seed

Macadamia Nut

IgG Food MAP with xMAP® Technology

Sample Report

The Great Plains	Laboratory, LLC			>lgG	Food MAP
	9900001		Physician Name:	NO PHYSICIAN	
Requisition #:			-		
Patient Name:	Sample		Date of Collection:	Nov 25, 2021	
Date of Birth:	Sep 19, 1981		Time of Collection:	10:00 AM	
Gender:	F		Print Date:	Nov 30, 2021	
IgG Food MAP	- Serum (190)	MFI x 1000			
Dairy			Date		0.43
Beta-Lactoglobulin		0.65	Fig		0.40
Casein		28.29	Grape		0.43
Cheddar Cheese		19.79	Grapefruit		0.37
Cow's Milk		20.78	Guava		0.59
Goat's Milk		4.07	Jackfruit		0.57
Mozzarella Cheese		16.28	Kiwi		11.43
Sheep's Yogurt		0.29	Lemon		0.24
Whey		21.33	Lychee		0.36
rogurt		21.93	Mango		24.24
Beans and Peas			Orange		0.23
Adzuki Bean		0.16	Papaya		1.92
Black Bean		0.16	Passion Fruit		0.45
Sarbanzo Bean		1.44	Peach		12.28
Green Bean		0.39	Pear		0.27
Green Pea		1.46	Pineapple		4.10
Kidney Bean		0.18	Plum		0.37
.entil		0.55	Pomegranate		0.39
.ima Bean		0.13	Raspberry		0.60
Mung Bean		0.09	Strawberry		16.33
vavy Bean		0.23	Watermelon		25.48
Pinto Bean		0.25	Grains		
Soybean		4.35	Amaranth		0.39
lofu		0.21	Barley		0.24
Fruits			Buckwheat		0.33
Acai Berry		0.35	Corn		0.21
Apple		14.32	Gliadin		12.68
Apricot		14.32	Malt		0.29
Banana		5.22	Millet		0.32
Blueberry		35.39	Oat		0.37
Cantaloupe		19.52	Quinoa		12.31
Cherry		2.76	Rice		0.40
Coconut		1.39	Rye		1.25
Cranberry		0.34	Sorghum		0.42
		0.34	Teff		0.36

Villiam Shaw, PhD, Lab Director | 9221 Quivira Road, Overland Park, KS 66215 | (913) 341-8949 | Fax: (913) 341-6207 | GPL4U.con

e Great Plains	Laboratory, LLC		>lgG
Requisition #:	9900001	Physician Name:	NO PHYSICIAN
Patient Name:	Sample	Date of Collection:	Nov 25, 2021
Date of Birth:	Sep 19, 1981	Time of Collection:	10:00 AM
Gender:	F	Print Date:	Nov 30, 2021



he Great Plains	Laboratory, LLC			≻ IgG	Food MAP
Requisition #:	9900001		Physician Name:	NO PHYSICIAN	
	Sample		Date of Collection:	Nov 25, 2021	
Patient Name:				NOV 25, 2021 10:00 AM	
Date of Birth:	Sep 19, 1981		Time of Collection:		
Gender:	F		Print Date:	Nov 30, 2021	
gG Food MAP	- Serum (190)	MFI x 1000			
Grains	Cont	inued	Goose		0.24
heat Gluten		1.57	Lamb		0.13
nole Wheat		1.17	Pork		0.20
Fish/Seafood		_	Turkey		0.26
alone		0.21	Nuts/Seeds		
chovy		0.24	Almond		0.37
88		0.20	Brazil Nut		0.30
nito		0.26	Cashew		1.13
dfish		2.18	Chestnut		0.79
ab		0.14	Chia Seed		0.59
libut		0.20	Flax Seed		0.36
k Mackerel		15.11	Hazelnut		153.58
oster		14.49	Hemp Seed		1.35
topus		0.35	Macadamia Nut		0.26
ster		0.37	Peanut		0.54
cific Mackerel (Saba)		0.25	Pecan		0.36
cific Saury		0.22	Pine Nut		0.13
rch		0.28	Pistachio		0.21
d Snapper		0.23	Pumpkin Seed		0.24
Imon		0.26	Sesame Seed		1.11
rdine		0.12	Sunflower Seed		0.73
allop		0.14	Walnut		24.68
rimp		0.29	Vegetables		
all Clam		0.20	Artichoke		15.53
uid		0.28	Asparagus		0.62
apia		22.27	Avocado		0.27
out		0.23	Bamboo Shoot		0.30
na		0.29	Bean Sprout		0.16
Meat/Fowl			Beet		0.54
ef		0.20	Bell Pepper		0.49
icken		0.23	Bitter Gourd		0.48
ck		0.17	Broccoli		0.48
g White		5.57	Brussel Sprout		0.59
g Yolk		11.63	Burdock Root		0.90
		11.03	Cabbage		18.53

Testing performed by The Great Plains Laboratory , LLC., Overland Park, Kansas. The Great Plains Laboratory has developed and dete characteristics of this test. This test has not been evaluated by the U.S. Food and Drug Administration. 2

m Shaw, PhD, Lab Director | 9221 Quivira Road, Overland Park, KS 66215 | (913) 341-8949 | Fax: (913) 341-6207 | GPL4U.com

The Great Plains	Laboratory, LLC
Requisition #:	9900001
Patient Name:	Sample
Date of Birth:	Sep 19, 1981
Gender:	F

Physician Name NO PHYSICIA Date of Collection Time of Collection

Print Date:

Nov 25, 2021 10:00 AM Nov 30, 2021

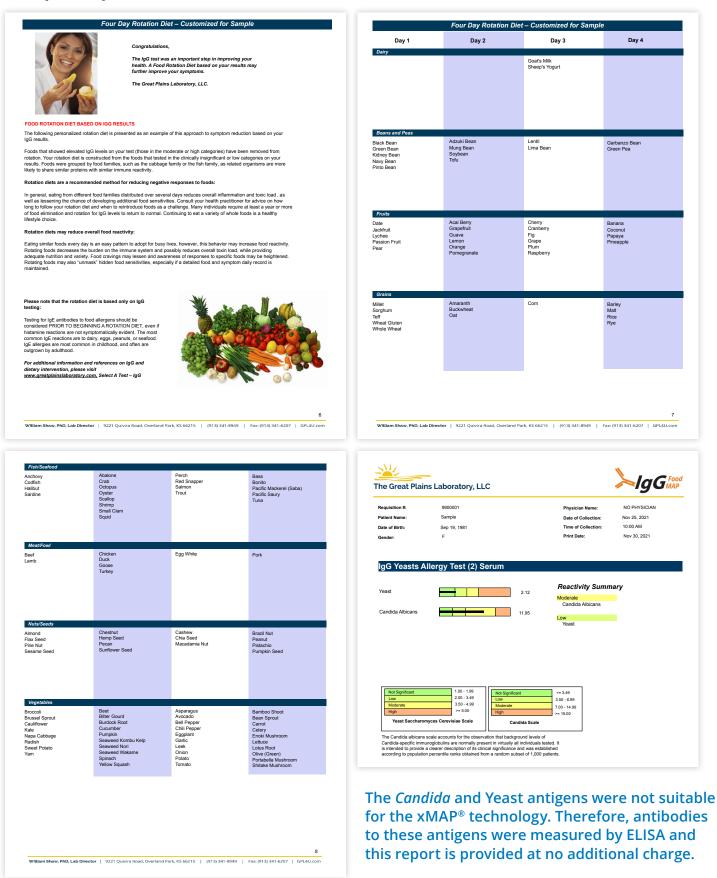
IgG Food MAP - Serum (190) MFI x 1000

		Reactivity S	Reactivity Summary		
		High			
Food Reactivity Scale	MFI* x 1000	Blueberry	Cabbage	Cantaloupe	
Not Significant	< 4.47	Casein Cow's Milk	Cheddar Cheese Dill	Cocoa Bean Hazelnut	
Low	4.47-9.86	Mango	Mozzarella Cheese	Strawberry	
Moderate	9.87-15.99	Tilapia	Walnut	Watermelon	
High	>=16	Whey	Yogurt	Zucchini	
(*) Median Fluorescent Intensity		Moderate			
		Apple Egg Yolk Kiwi Peach	Apricot Gliadin Lobster Quinoa	Artichoke Jack Mackerel Meat Glue	
		Low			
		Banana	Bromelain	Egg White	

Testing performed by The Great Plains Laboratory, LLC., Overland Park, Kansas. The Great Plains Laboratory has deve characteristics of this test. This test has not been evaluated by the U.S. Food and Drug Administration. ed and del ed the per

m Shaw, PhD, Lab Director | 9221 Quivira Road, Overland Park, KS 66215 | (913) 341-8949 | Fax: (913) 341-6207 | GPL4U.com

Sample Report, continued



"I believe the Great Plains IgG Food Allergy Test is a phenomenal tool that I have implemented in my practice on a daily basis to help treat patients for a wide variety of symptoms like headaches, IBS, fatigue, abdominal pain, dermatitis, hair loss, joint pain, acne, thyroid disorders, and vitamin deficiencies. I believe I am a better physician due to this testing transforming my ability to properly diagnose and treat patients effectively."

- Bridget, M.D.

References

- Anderson S, Wakeley P, Wibberley G, et al. Development and evaluation of a Luminex multiplex serology assay to detect antibodies to bovine herpes virus 1, parainfluenza 3 virus, bovine viral diarrhoea virus, and bovine respiratory syncytial virus, with comparison to existing ELISA detection methods. J Immunol Methods 2011;366:79-88.
- Gimenez-Lirola LG, Jiang Y-H, Sun D, et al. Simultaneous Detection of Antibodies against Apx Toxins ApxI, ApxII, ApxIII, and ApxIV in Pigs with Known and Unknown Actinobacillus pleuropneumoniae Exposure Using a Multiplexing Liquid Array Platform. Clin Vaccine Immunol 2014;21(1):85-95.
- Langenhorst RJ, Lawson S, Kittawornrat A, et al. Development of a fluorescent microsphere immunoassay for detection of antibodies against porcine reproductive and respiratory syndrome virus using oral fluid samples as an alternative to serum-based assays. Clin Vaccine Immunol 2012;19(2):180-9.
- Smits GP, van Gageldonk PG, Schouls LM, et al. Development of a Bead-Based Multiplex Immunoassay for Simultaneous Quantitative Detection of IgG Serum Antibodies against Measles, Mumps, Rubella, and Varicella-Zoster Virus. Clin Vaccine Immunol 2012;19(3):396-400.
- Alpay, K. et al. Diet restriction in migraine, based on IgG against foods: a clinical double-blind, randomised, cross-over trial. Cephalalgia : an international journal of headache 30, 829-837, doi:10.1177/0333102410361404 (2010).
- Mitchell, N. et al. Randomised controlled trial of food elimination diet based on IgG antibodies for the prevention of migraine like headaches. Nutrition journal 10, 85, doi:10.1186/1475-2891-10-85 (2011).
- Zar, S., Mincher, L., Benson, M. J. & Kumar, D. Food-specific IgG4 anti-body-guided exclusion diet improves symptoms and rectal compliance in irritable bowel syndrome. Scandinavian journal of gastroenterology 40, 800-807, doi:10.1080/00365520510015593 (2005).
- 800-807, doi:10.1080700365520510015593 (2005). Atkinson, W., Sheldon, T. A., Shaath, N. & Whorwell, P. J. Food elimination based on IgG antibodies in irritable bowel syndrome: a randomised con-trolled trial. Gut 53, 1459-1464, doi:10.1136/gut.2003.037697 (2004). Drisko, J., Bischoff, B., Hall, M. & McCallum, R. Treating irritable bowel syndrome with a food elimination diet followed by food challenge and probabics. Journal of the American College of Nutriting 25, 514-522
- probiotics. Journal of the American College of Nutrition 25, 514-522 (2006).
- Bentz, S. et al. Clinical relevance of IgG antibodies against food antigens in Crohn's disease: a double-blind cross-over diet intervention study. Digestion 81, 252-264, doi:10.1159/000264649 (2010).

- · Egger, J., Carter, C. M., Soothill, J. F. & Wilson, J. Oligoantigenic diet treatment of children with epilepsy and migraine. The Journal of pediatrics 114, 51-58 (1989).
- Pelsser, L. M. et al. Effects of a restricted elimination diet on the behavior of children with attention-deficit hyperactivity disorder (INCA study): a randomized controlled trial. Lancet 377, 494-503, doi:10.1016/S0140-6736(10)62227-1 (2011). 8b cookbook
- Veling, M. & Trevino, R. (2002). Food allergies and hypersensitivities. Alexandria, VA: American Academy of Otolaryngology-Head and Neck Surgery Foundation.
- globulin G RAST testing relief. Otoloryngol Head Neck Surg 2000;123:48-54. Dixon H, Treatment of delayed food allergy based on specific immuno-
- Ciao, G. et al, Effect of gluten free diet on immune response to gliadin in patients with non-celiac gluten sensitivity. BMC Gastroenterology 14, 26 (2014)
- Kemeny DM, et al Sub-class of IgG in allergic disease. I. IgG sub-class antibodies in immediate and non-immediate food allergy. Clin Allergy. 1986; 16:571-81
- Hofman, T. IgE and IgG antibodies in children with food allergy. Rocz Akad Med Bialymst 40, 468-473 (1995).
- Jenmalm, M. C. & Bjorksten, B. Cord blood levels of immunoglobulin G subclass antibodies to food and inhalant allergens in relation to maternal atopy and the development of atopic disease during the first 8 years Allergy and Clinical and experimental allergy : journal of the British Society for Allergy and Clinical Immunology 30, 34-40 (2000).
- Lucarelli, S. et al. Food allergy in cystic fibrosis. Minerva pediatrica 46, 543-548 (1994).
- van der Woude, F. J. et al. Do food antigens play a role in the pathogene-sis of some cases of human glomerulonephritis? Clinical and experimental immunology 51, 587-594 (1983). James L.K and Till S.J Potential mechanisms for IgG4 inhibition of imme-
- diate hypersensitivity reactions. Current Allergy Asthma Rep. 16:23, 2016 PMID: 26892721
- Caubet J.C. et al. Natural tolerance development in cow's milk allergic children: IgE and IgG4 epitope binding. European Journal of Allergy and Clinical Immunology, First published: 27 March 2017

The Benefits of Testing

- IgG testing determines if food reactions are contributing to physical or mental symptoms, and much more quickly than eliminating and then reintroducing each suspect food one-by-one over a period of time.
- Removal of highly reactive foods from the diet is a non-invasive therapy that often mitigates a patient's symptoms.
- Research and clinical studies suggest food allergies identified by IgG testing can be major contributing factors to many chronic health conditions.
- Eliminating all identified IgG-positive foods after testing can reduce stress on the immune system, decrease inflammation (helping to heal "leaky gut"), resolve food cravings, and reduce the potential for eating disorders.

Contact Us

GP-Labs.com (913) 341-8949 sales@gp-labs.com



Address 11813 West 77th St.

Lenexa, KS 66214 United States