

IgG Food MAP with xMAP® Technology

Now with Revolutionary Immunofluorescent Bead Technology

GENERAL DESCRIPTION

IgG Food MAP measures 190 foods, plus *Candida albicans* and yeast. 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.



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.



Upgraded Sensitivity and Specificity

GPL's xMAP® immunoassay with fluorescence readout has proven to be even more sensitive and precise than ELISA tests.



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 reduction of sample volume requirements and reagents while increasing sensitivity and specificity as compared to traditional ELISA tests. The upgraded immunoassay is cost and time effective, easy to perform and reproducible.



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 bead-based platform only requires two wells per sample.



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. Once test results are available for review, our Quality Assurance team carefully verifies that quality control measures are within instrument and assay specifications.



Tests for Specific Food Antigenic Proteins

GPL has upgraded from the ELISA's single analyte detection to multiple analyte detection. The multi-plexed, 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.

CLINICAL USEFULNESS

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.

SPECIMEN REQUIREMENTS
 Serum: 1 ml
 Dried Blood Spot (DBS): five full circles

The Great Plains Laboratory, LLC

Requisition #: 9900001
 Patient Name: Sample
 Date of Birth: Sep 19, 1981
 Gender: F

Physician Name: NO PHYSICIAN
 Date of Collection: Nov 25, 2021

IgG Food MAP - Serum (190) MFI x 1000

Food Category	Food Item	MFI x 1000
Dairy	Beta-Lactoglobulin	0.65
	Caseln	28.29
	Cheddar Cheese	19.79
	Cow's Milk	20.78
	Goat's Milk	4.07
	Mozzarella Cheese	16.28
	Sheep's Yogurt	0.29
	Whey	21.33
	Yogurt	21.93
	Beans and Peas	Azuki Bean
Black Bean		0.20
Garbanzo Bean		1.44
Green Bean		0.39
Green Pea		1.46
Kidney Bean		0.18
Lentil		0.55
Lima Bean		0.13
Mung Bean		0.09
Navy Bean		0.23
Fruits	Apple	14.32
	Apricot	11.72
	Banana	5.22
	Blueberry	35.39
	Cantaloupe	19.52
	Cherry	2.76
	Coconut	1.39
	Cranberry	0.34
	Pineapple	1.46
	Raspberr	0.18

Testing performed by The Great Plains Laboratory, LLC, Overland Park, Kansas. The Great Plains Laboratory, LLC has not been evaluated by the U.S. Food and Drug Administration.

William Shaw, PhD, Lab Director | 9221 Quivira Road, Overland Park, KS 66215

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Requisition #: 9900001
 Patient Name: Sample
 Date of Birth: Sep 19, 1981
 Gender: F

Physician Name: NO PHYSICIAN
 Date of Collection: Nov 25, 2021

IgG Food MAP - Serum (190) MFI x 1000

Food Category	Food Item	MFI x 1000	
Grains	Wheat Gluten	1.57	
	Whole Wheat	1.17	
	Fish/Seafood	Abalone	0.21
		Anchovy	0.34
		Bass	0.20
		Bonito	0.26
		Codfish	2.18
		Crab	0.14
		Halibut	0.20
		Jack Mackerel	15.11
Lobster		14.49	
Octopus		0.35	
Meat/Fowl	Beef	0.20	
	Chicken	0.23	
	Duck	0.17	
	Egg White	5.57	
	Egg Yolk	11.63	
	Nuts	Almond	0.24
		Brazil Nut	0.20
		Cashew	0.26
		Chestnut	2.18
		Chia Seed	0.14
Flax Seed		0.20	
Hazelnut		15.11	
Hemp Seed		14.49	
Macadamia		0.35	
Peanut		0.37	

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The Great Plains Laboratory, LLC

Requisition #: 9900001
 Patient Name: Sample
 Date of Birth: Sep 19, 1981
 Gender: F

Physician Name: NO PHYSICIAN
 Date of Collection: Nov 25, 2021
 Time of Collection: 10:00 AM
 Print Date: Nov 30, 2021

IgG Food MAP - Serum (190) MFI x 1000

Food Category	Food Item	MFI x 1000	
Vegetables	Carrot	0.93	
	Cauliflower	0.24	
	Celery	0.51	
	Chili Pepper	0.49	
	Cucumber	0.39	
	Eggplant	0.75	
	Enoki Mushroom	0.45	
	Garlic	0.56	
	Kale	0.51	
	Leek	0.31	
Miscellaneous	Bromelain	8.09	
	Cane Sugar	0.50	
	Cocoa Bean	254.40	
	Coffee	0.34	
	Green Tea	0.18	
	Honey	3.00	
	Meat Glue	14.48	
	Oolong Tea	0.35	
	Herbs/Spices	Basil	0.35
		Bay Leaf	0.46
Black Pepper		0.72	
Cayenne Pepper		0.51	
Cilantro		1.23	
Cinnamon		0.43	
Cloves		0.41	
Cumin		0.70	
Curry		0.64	
Dill		211.74	

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

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