



Nut Zoomer

Key Clinical Messages

What is the Vibrant Nut Zoomer Test?

The **Nut Zoomer** is a blood test that detects immune reactions to seven different nuts by analyzing 31 of the most antigenic peptides in almonds, cashews, walnuts, brazil nuts, pistachios, pecans, and macadamia nuts.

The Nut Zoomer assesses IgA and IgG reactions to 31 different peptides in nuts and can be ordered as a stand-alone test or as part of a Zoomer bundle by sampling the blood to determine an individual's risk for nut sensitivity.

Conditions and symptoms which may benefit from Nut Zoomer testing include:

Which Patients Benefit from This Test?

- Gastrointestinal dysfunction
- Diarrhea
- Constipation
- IBS
- Neurological disorders
- Autoimmune diseases
- Inflammatory conditions
- Skin manifestations
- Eczema
- Headaches/migraines
- Joint pain
- Asthma
- Cognitive impairments
- Brain fog
- Fatigue
- History of nut sensitivity

Why Order the Nut Zoomer?

By analyzing both IgA and IgG reactions to the most antigenic peptides found in nuts, you can gain a more thorough understanding of an individual's sensitivity to nuts.

Unlike food sensitivity panels which test immune reactions to whole proteins in nuts, the Nut Zoomer tests reactions to specific nut peptides.

Testing for food sensitivities at the peptide level models immune reactions under normal digestion and absorption conditions. Under normal conditions, proteins are broken down in the gastrointestinal tract by digestive enzymes and hydrochloric acid into larger polypeptides and then into smaller peptides and amino acids. Smaller peptides and amino acids are then absorbed through the intestinal epithelial lining into circulation for systemic use.

Peptide level testing also increases test sensitivity because peptides in foods are highly specific to the food from which they are derived, and, therefore, less likely to induce cross-reactivity or be 'confused' by the immune system for other proteins. It is also the only way to detect antibodies against all regions of a protein.

Nuts are known to be a highly allergenic food, but they are also a common food sensitivity, which is typically described as a delayed hypersensitivity food reaction. Since delayed reactions can occur from hours to days after consumption, it's more difficult to identify food sensitivities compared to food allergies. A Nut Zoomer can help patients understand whether nuts are well-tolerated or are associated with a loss of immune tolerance.





What Markers Are Included on the Nut Zoomer?

The Nut Zoomer analyzes reactions to 31 different peptide antigens in seven different nuts.

Peanut Family	Nut Protein Family	Peptide Antigens
Almond	PR-10 family	Pru du 1
	PR-5 family	Pru du 2
	Prolamin family	Pru du 3
	Profilin family	Pru du 4
	60s acidic ribosomal protein P2 Family	Pru du 5
	Cupin	Pru du 6
Cashew	Vicilin-like 7s globulin protein	Ana o 1
	11s globulin protein	Ana o 2
	2s albumin protein	Ana o 3
Walnut	Prolamin superfamily	Jug n 1, Jug r 1, Jug r 3
	Cupin superfamily	Jug n 2, Jug r 2, Jug r 4
	11s globulin protein	Jug n 4
	Profilins family	Jug r 5, Jug r 7
	Vicilin protein	Jug r 6
Brazil Nuts	2s albumin protein family	Ber e 1
	11s globulin protein	Ber e 2
Pistachio	2s albumin protein	Pis v 1
	11s globulin protein	Pis v 2, Pis v 5
	7s globulin	Pis v 3
	Magnesium superoxide dismutase	Pis v 4
Pecan	2s albumin	Car i 1
	7s albumin	Car i 2
	11s globulin	Car i 4
Macadamia Nut	7s globulin 17.4 kDa antigen	



Methodology

Vibrant Wellness is a CLIA-certified and CAP-accredited lab that utilizes the most reliable, FDA- approved methodologies to measure nut peptides.

- **Peptide microarray technology synthesizes on silicon microchip wafers** to detect antibody-antigen binding at the epitope level
- Advantages to peptide microarray technology include:
 - Allows for the ability to zoom in on the specific peptide sequences with a high level of precision
 - High level of sensitivity and specificity
 - Less false positive and negative results
 - High reproducibility

Which Tests Pair Well with the Nut Zoomer?

Food Zoomer Bundle: to assess immune reactions (IgA and IgG) to other peptides in commonly consumed foods

- Wheat Zoomer, Corn Zoomer, Dairy Zoomer, Egg Zoomer, Grain Zoomer, Lectin Zoomer, Nut Zoomer, Soy Zoomer

Allergy Panel: to assess IgE immune reactions to different nuts.

Food Sensitivity Test: to assess IgG and IgA immune reactions to raw, whole, water-soluble proteins.

Test Prep for Blood Sample

Collection: One (1) EDTA specimen tube

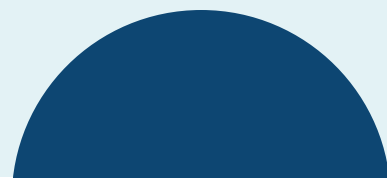
Hydration Restrictions: None

Fasting Restriction: Not required.

Diet Restrictions: None. Patients should consume their typical diet before testing. Food challenges are not recommended.

Medication Restrictions: None

Dietary Supplement Restrictions: None





Reference Ranges and Interpretation of Results

Reference Ranges:

Reference ranges have been established using 192 healthy individuals.

Results:

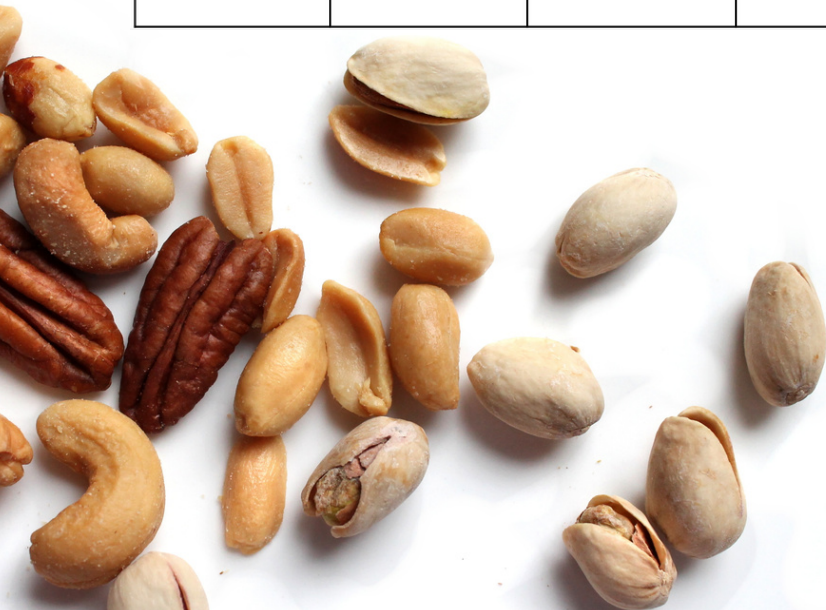
Vibrant uses proprietary fluorescent analysis to assay specific total IgG (subclasses 1,2,3,4), and total IgA (subclasses 1,2) antibodies.

The classification of positive to moderate to negative denotes the level of IgG and/or IgA antibodies detected through this analysis. The results are displayed as positive, moderate, or negative:

- A positive result indicates elevated IgG/IgA to the antigen (>97.5th percentile) with respect to the reference range
- A moderate result indicates a moderately elevated IgG/IgA reaction to the food antigen (92.5th-97.5th percentile)
- A negative result indicates normal IgG/IgA reaction (<92.5th percentile) to the food antigen

Example of Results:

Positive		Moderate		Negative
IgG	IgA	IgG	IgA	
Cashew Ana o 2 Ana o 3	Almond Pru du 3	Juglans nigra (Black Walnut) Jug n 2	Juglans regia (English Walnut) Jug r 1 Jug r 5	Almond Pru du 1 Pru du 2 Pru du 4 Pru du 5 Pru du 6
Juglans nigra (Black Walnut) Jug n 1 Jug n 4	Cashew Ana o 3	Juglans regia (English Walnut) Jug r 4	Brazil Nut Ber e 1	Cashew Ana o 1
Juglans regia (English Walnut) Jug r 1 Jug r 2 Jug r 5 Jug r 7	Juglans nigra (Black Walnut) Jug n 1 Jug n 2 Jug n 4		Pistachio Pis v 5	Juglans regia (English Walnut) Jug r 3 Jug r 6
Brazil Nut Ber e 1	Juglans regia (English Walnut) Jug r 2		Macadamia Nut 17.4 kDa antigen	Brazil Nut Ber e 2
				Pistachio Pis v 1 Pis v 2 Pis v 3 Pis v 4
				Pecan 2s albumin- Car i 1 Car i 2 11s globulin- Car i 4
				Macadamia Nut 7s globulin



Interpretation of Results

- Positive for IgG:** Consider an elimination diet.
- Moderate for IgG:** Consider an elimination diet or rotation plan.
- Positive/Moderate for IgA:** Consider an elimination diet.

Regulatory Statement:

This test has been laboratory developed and their performance characteristics determined by Vibrant America LLC, a CLIA-certified laboratory performing the test CLIA#:05D2078809. The test has not been cleared or approved by the U.S. Food and Drug Administration (FDA). Although FDA does not currently clear or approve laboratory-developed tests in the U.S., certification of the laboratory is required under CLIA to ensure the quality and validity of the tests.