SHAWN GREER

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FINAL REPORT

Accession ID: 2412166077

Provider Information

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Report Information

Current Result | Previous Result | In Control | Moderate | Risk

Specimen Information

Sample Type	Collection Time	Received Time	Report	Final Report Date
Serum	2025-01-29 18:21 (UTC)	2025-01-30 21:58 (UTC)	Neural Zoomer Plus - P2	2025-02-07 03:51 (UTC)

VibrantWellness
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Neural Zoomer Plus

INTRODUCTION

Vibrant Wellness is pleased to present to you 'Neural Zoomer Plus', to help you make healthy lifestyle and dietary choice in consultation with your healthcare provider. It is intended to be used as a tool to encourage a general state of health and well-being.The Vibrant Neural Zoomer Plus is an array of neural antigens and genetic tests which offers very specific antibody-to-antigen recognition and potential risk to develop Neurological Autoimmune disease. The panel is designed to assess an individual's IgG, IgA, and IgM sensitivity to these antigens. Neural Zoomer plus aims to reduce the prevalence of neurological conditions by empowering patients and healthcare providers with a vital resource for early risk detection and an enhanced focus on personalized primary prevention.

Methodology:

The Vibrant Neural Zoomer test is a semiquantitative assay that detects IgG, IgA, and IgM antibodies in human serum/DBS for the neural antigens with multiplexed chemiluminescence immunoassay (CLIA) methodology. The Vibrant ApoE genetics test uses real-time PCR methodology. DNA is extracted and purified from blood/saliva samples and a SNP (single nucleotide polymorphism) genotyping assay is performed using real-time PCR to detect the specific allele target.

Interpretation of Report:

The Neural Zoomer summary page provides concise information on the list of antigens with antibody titers that are outside the normal reference range. Reference ranges have been established using 2000 healthy individuals. Vibrant utilizes proprietary reporter-based analysis which is designed to assay specific total IgG (subclasses 1, 2, 3, 4), total IgA (subclasses 1, 2), and total IgM antibodies. Additionally, the previous value (if available) is also indicated to help check for improvements every time the test is ordered.

This is followed by a complete list of all antigens tested including IgG+IgA and IgM antibody titers. A classification of Green denotes a results that is within the normal reference range, the classification of Yellow denotes a result that is moderately elevated titer with respect to the reference range and the classification of Red denotes a result that is elevated with respect to the normal reference range.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for Neural Zoomer + panel is performed by Vibrant America, a CLIA certified lab CLIA#:05D2078809 and ApoE Genetics is performed by Vibrant Genomics, a CLIA certified lab CLIA#: 05D2098445. Vibrant Wellness provides and makes available this report and any related services pursuant to the Terms of Use Agreement (the "Terms") on its website at www.vibrant-wellness.com. By accessing, browsing, or otherwise using the report or website or any services, you acknowledge that you have read, understood, and agree to be bound by these terms. If you do not agree to these terms, you shall not access, browse, or use the report or website. The statements in this report have not been evaluated by the Food and Drug Administration and are only meant to be lifestyle choices for potential risk mitigation. Please consult your healthcare provider for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

Please note:

It is important that you discuss any modifications to your diet, exercise, and nutritional supplementation with your healthcare provider before making any changes. Pediatric reference ranges have not been established for this test

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Neural Zoomer Plus - Summary

Neural Zoomer Plus

Reference Range: In Control: ≤10 | Moderate: 10.1-20 | Risk: >20

Demyelination Antigens	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Tubulin	10.8	7.3		

Tubulin is a 55 kDa cytoplasm globular protein expressed in blood, nervous, secretory, reproductive, musculoskeletal and other internal cells. Anti-tubulin is associated with alcoholic liver disease, demyelinating disease, Graves' disease, Hashimoto's thyroiditis, infectious agent exposure PANDAS/ANDAS/OCD, rheumatoid arthritis, and recent onset type 1 diabetes.

Anti-Neurofascin	10.9	4.4		

Neurofascin (NF), a cell adhesion molecule expressed in both the CNS and the peripheral nervous system (PNS), plays important roles in developing and maintaining neural structures. Anti-neurofascin autoantibodies are found mainly in combined central and peripheral demyelination (CCPD), a rare demyelinating condition affecting both CNS and peripheral nervous system (PNS) tissues, and also in chronic inflammatory demyelinating polyneuropathy (CIDP) and axonal injury in patients with multiple sclerosis (MS). Recognition of this antibody may be important in treatment management, because anti-neurofascin seropositive CCPD patients respond well to Intravenous Immunoglobulin or plasma exchange treatments.

Blood Brain Barrier Disruption	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Microglia	10.3	7.1		

Microglia are a type of macrophage located throughout the brain and spinal cord that act as the first and main form of active immune defense in the CNS. These markers indicate a destruction of the blood brain barrier and are found to play a role in tissue destruction of Alzheimer's disease.

Optical and Autonomic Nervous System Disorders	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Aquaporin4	17.7	4.6		

Neuromyelitis optica is an inflammatory demyelinating disorder of the CNS. The discovery of circulating IgG antibodies against the astrocyte water channel protein aquaporin 4 (AQP4) and the evidence that AQP4-IgG is involved in the development of neuromyelitis optica revolutionized the understanding of the disease. Anti-aquaporin 4 antibodies have also been shown in patients with peripheral demyelination. In addition, human aquaporin-4 cross-reactivity with corn and soybean aquaporins, hence, consider ordering Vibrant's Lectin Zoomer panel for a comprehensive assessment.

Brain Autoimmunity	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Purkinje cell	11.2	6.8		

Purkinje cells, or Purkinje neurons, are a class of GABAergic neurons located in the cerebellum. Purkinje cells are aligned like dominos stacked one in front of the other. Their large dendritic arbors form nearly two-dimensional layers through which parallel fibers from the deeper-layers pass. Current results suggest the presence of autoantibodies that target these neurons.

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Brain Autoimmunity	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-RAGE peptide	12.6	4.7		

The receptor for advanced glycosylation end products (RAGE) has been identified as the major receptor at the blood brain barrier to mediate the flux of amyloid-β protein (Aβ) from the blood to the brain. The anti-RAGE antibodies were found in Alzheimer's disease patients. In addition, studies demonstrated that they were significantly higher in Alzheimer's disease patients with diabetes.

Anti-Endothelin A receptor	10.6	5.1		

Endothelin A receptor development of distinct neural cell types including Schwann cells, astrocytes, and neural crest cells as well as physiologic renal growth and development. The endothelin A receptor has a greater affinity for ET-1, one of the peptides of endothelin. The endothelin A receptor autoantibodies are found in vascular dementia.

Brain Inflammation	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-NMDA receptor	17.2	4.1		

N-methyl-D-aspartate (NMDA) is an amino acid derivative very similar to glutamate. Because glutamate is the excitatory neurotransmitter found in most synapses of the central nervous system, pharmacologists made this analogue called NMDA to activate a sub-type of glutamate receptors. Anti-NMDA receptor encephalitis, first identified in 2007, is an autoimmune disease that occurs when antibodies turn on the brain and cause it to swell. Anti-NMDA receptor and anti-dsDNA, a major contributor in systemic lupus disease, share a common pentapeptide sequence, thus making them candidates for cross-reactivity.

Anti-Dipeptidyl aminopeptidase like protein 6	16.1	6.4		

Dipeptidyl aminopeptidase-like protein 6 is a protein that in humans is encoded by the DPP6 gene. This gene encodes a single-pass type II membrane protein that is a member of the S9B family in clan SC of the serine proteases. Antibodies against dipeptidyl-peptidase-like protein-6 (DPP6), an auxiliary subunit of Kv4.2 potassium channels involved in signal transduction, were identified in 7 patients with encephalitis.

Anti-Leucine-rich glioma-inactivated protein 1 (Anti-LGI1)	10.3	9.2		

The leucine-rich glioma inactivated-1 gene is rearranged as a result of translocations in glioblastoma cell lines. The protein contains a hydrophobic segment representing a putative transmembrane domain with the amino terminus located outside the cell. It also contains leucine-rich repeats with conserved cysteine-rich flanking sequences. This gene is predominantly expressed in neural tissues and its expression is reduced in low grade brain tumors and significantly reduced or absent in malignant gliomas. LGI1 antibody-associated encephalitis has increasingly been recognized as a primary autoimmune disorder.

Anti-Dopamine receptor 2	13.2	6.0		

Similar to dopamine receptor 1, dopamine receptor 2 (DR2) is highly expressed in basal ganglia, for example striatum, but also in the cortex, hippocampus, and substantia nigra. Modulation of DR2 expression in the basal ganglia has been associated with schizophrenia, depression, and movement disorders. Movement and psychiatric disorders associated with DR2 antibody are biologically plausible as DR2 is intimately linked to the control of movement and behavior.

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Neural Zoomer Plus - Summary

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Infections	Current IgG	Current IgM	Previous IgG	Previous IgM
Cytomegalovirus EIA Antigen	>30	5.0		

Cytomegalovirus (CMV) infections have been reported frequently to be associated with Guillain–Barré syndrome (GBS). In GBS, anti-GM2 antibodies have been detected in 22-67% of CMV-infected patients. Studies showed that anti-ganglioside antibodies that can bind to peripheral nerves and interfere with neuromuscular transmission in CMV-infected GBS patients are induced by molecular mimicry between GM2 and antigens that are induced by a CMV infection.

Epstein Barr Virus VCA gp125	25.8	3.7		

Central nervous system (CNS) complications of Epstein-Barr virus (EBV) infection occur in up to 18% of patients with infectious mononucleosis and include encephalitis, meningitis, and psychiatric abnormalities. Antibodies against the EBV nuclear antigen complex (EBNAc) and EBNA-1 have been correlated with increased risk of multiple sclerosis (MS). The role of EBV in the pathogenesis of multiple sclerosis was attributed to molecular mimicry between EBV and central nervous system (CNS) antigen, myelin basic protein (MBP).

Streptococcal A	>30	4.5		

Group A beta-haemolytic streptococcal (GABHS) tonsillitis, more frequently known as streptococcal pharyngitis, is highly prevalent in children, especially in those who are between the ages of 5 and 15 years. A subset of these children may develop PANDAS characterized by pediatric obsessive-compulsive disorder (OCD) and tic disorders, and Sydenham Chorea. Anti-streptococcal A antibodies are shown to cross react with different brain proteins that could lead to neuropsychiatric symptoms.

Epstein Barr Virus EBNA1	13.9	2.1		

Central nervous system (CNS) complications of Epstein-Barr virus (EBV) infection occur in up to 18% of patients with infectious mononucleosis and include encephalitis, meningitis, and psychiatric abnormalities. Antibodies against the EBV nuclear antigen complex (EBNAc) and EBNA-1 have been correlated with increased risk of multiple sclerosis (MS). The role of EBV in the pathogenesis of multiple sclerosis was attributed to molecular mimicry between EBV and central nervous system (CNS) antigen, myelin basic protein (MBP).

Epstein Barr Virus p23	13.8	1.9		

Central nervous system (CNS) complications of Epstein-Barr virus (EBV) infection occur in up to 18% of patients with infectious mononucleosis and include encephalitis, meningitis, and psychiatric abnormalities. Antibodies against the EBV nuclear antigen complex (EBNAc) and EBNA-1 have been correlated with increased risk of multiple sclerosis (MS). The role of EBV in the pathogenesis of multiple sclerosis was attributed to molecular mimicry between EBV and central nervous system (CNS) antigen, myelin basic protein (MBP).

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Demyelination Antigens	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Tubulin	10.8	7.3		
Anti-Myelin basic protein	8.6	5.0		
Anti-Myelin oligodendrocyte glycoprotein	7.2	5.4		
Anti-Myelin proteolipid protein	8.4	5.0		
Anti-Neurofascin	10.9	4.4		
Anti-MAG	7.2	4.5		

Blood Brain Barrier Disruption	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-s100b	7.2	4.8		
Anti-Glial fibrillary acidic protein	6.2	5.6		
Anti-Microglia	10.3	7.1		
Anti-Glucose regulated protein 78	8.6	4.9		

Optical and Autonomic Nervous System Disorders	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Neuron specific enolase	8.1	4.2		
Anti-Aquaporin4	17.7	4.6		
Anti-Recoverin	5.4	2.9		
Anti-CV2	7.4	4.6		

Peripheral Neuropathy	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-GM1	6.3	7.5		
Anti-GM2	1.8	4.1		
Anti-Hu	7.1	4.3		
Anti-Ri	7.5	5.5		
Anti-Amphiphysin	7.7	3.9		

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Neuromuscular disorders	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Acetylcholine receptors	7.1	4.8		
Anti-Muscle specific kinase	6.5	4.8		
Anti-Voltage gated calcium channels	9.3	5.5		
Anti-Voltage gated potassium channels	2.2	4.4		
Anti-Titin	7.7	4.0		

Brain Autoimmunity	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Cerebellum	6.0	4.1		
Anti-Purkinje cell	11.2	6.8		
Anti-Yo	8.2	5.0		
Anti-Amyloid beta (25-35)	5.4	5.5		
Anti-Amyloid beta (1-42)	6.8	4.8		
Anti-RAGE peptide	12.6	4.7		
Anti-Tau	4.9	5.0		
Anti-Glutamate	10.0	6.5		
Anti-Dopamine	6.5	6.0		
Anti-Hydroxytryptamine	7.8	3.9		
Anti-Alpha-synuclein	8.3	4.7		
Anti-α1 and β2 adrenergic receptors	7.4	4.4		
Anti-Endothelin A receptor	10.6	5.1		

Brain Inflammation	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-NMDA receptor	17.2	4.1		
Anti-AMPA receptor	7.2	4.5		
Anti-GABA receptors	5.0	5.8		

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Reference Range: In Control: ≤10 | Moderate: 10.1-20 | Risk: >20

Brain Inflammation	Current (IgG + IgA)	Current IgM	Previous (IgG + IgA)	Previous IgM
Anti-Dipeptidyl aminopeptidase like protein 6	16.1	6.4		
Anti-Glycine receptor	2.3	3.9		
Anti-Neurexin 3	7.4	6.6		
Anti-Contactin-Associated Protein-like 2 Antibodies	1.5	7.1		
Anti-Leucine-rich glioma-inactivated protein 1 (Anti-LGI1)	10.3	9.2		
Anti-Ma	8.9	4.4		
Anti-Dopamine receptor 1	2.6	5.1		
Anti-Dopamine receptor 2	13.2	6.0		

Infections	Current IgG	Current IgM	Previous IgG	Previous IgM
Cytomegalovirus EIA Antigen	>30	5.0		
Cytomegalovirus GlyB	3.9	6.7		
Cytomegalovirus p150	2.2	7.5		
Cytomegalovirus p28	2.7	3.7		
Cytomegalovirus p52	2.8	2.9		
Cytomegalovirus p65	3.8	6.7		
Cytomegalovirus p38	7.5	5.4		
Epstein Barr Virus EA Antigen	9.3	2.4		
Epstein Barr Virus EBNA1	13.9	2.1		
Epstein Barr Virus VCA gp125	25.8	3.7		
Epstein Barr Virus p18	3.4	4.8		
Epstein Barr Virus p23	13.8	1.9		
HSV-1	7.1	3.6		
HSV-2	4.7	1.8		

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Patient Name: SHAWN GREER
Date of Birth: 07-12-1968 Accession ID: 2412166077
Service Date: 2025-01-29 18:21 (UTC)

Neural Zoomer Plus

Neural Zoomer Plus

Reference Range: In Control: ≤10 Moderate: 10.1-20 Risk: >20

Infections	Current IgG	Current IgM	Previous IgG	Previous IgM
HHV-6	0.9	4.6		
HHV-7	2.6	4.5		
Streptococcal A	>30	4.5		

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Neural Zoomer Plus

Risk and Limitations

This test has been developed and its performance characteristics determined by Vibrant America LLC., a CLIA certified lab and Vibrant Genomics, a CLIA certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration. Vibrant Wellness provides additional contextual information on these tests and provides the report in a more descriptive fashion.

Vibrant Neural Zoomer panel does not demonstrate absolute positive and negative predictive values for any condition.

Vibrant Neural Zoomer panel testing is performed at Vibrant America, a CLIA certified laboratory utilizing ISO-13485 developed technology and Vibrant Genomics, a CLIA certified laboratory. Vibrant America and Vibrant Genomics have effective procedures in place to protect against technical and operational problems. However, such problems may still occur. Examples include failure to obtain the result for a specific test due to circumstances beyond Vibrant's control. Vibrant may re-test a sample to obtain these results but upon re-testing the results may still not be obtained. As with all medical laboratory testing, there is a small chance that the laboratory could report incorrect results. A tested individual may wish to pursue further testing to verify any results.

Genetic testing is helpful in analyzing the risk of various diseases. However, it is important to note that Genetic risk determinants are neither necessary nor sufficient for the development of diseases. Environmental and lifestyle risk factors could also affect the risk of disease development. Results from genetic analysis should always be interpreted along with clinical findings on the individual. Genetic testing evaluates only for the genotypes indicated; it does not test for other genetic abnormalities found elsewhere in the genome. Different genetic variants can be tested by different genetic labs to evaluate the risk for a particular disease, depending on what is tested, genetic risk may not be comparable between labs. It should be realized that there are possible sources of error like any lab testing which include sample misidentification, trace contamination of PCR reactions, technical errors and rare genetic variants that may interfere with analysis.

Some individuals may feel anxious about getting their genetic test health results. If the potential user feels very anxious, such user should speak to his or her doctor or other health care professional prior to collection of a sample for testing. Users should consult with their doctor or other health care professional if they have any questions or concerns about the results of their test or their current state of health. Users of the test are also encouraged to discuss their test results with a genetic counselor, board-certified clinical molecular geneticist, or equivalent health care professional.

The information in this report is intended for educational purposes only. While every attempt has been made to provide current and accurate information, neither the author nor the publisher can be held accountable for any errors or omissions. Tested individuals may find their experience is not consistent with Vibrant's selected peer reviewed scientific research findings of relative improvement for study groups. The science in this area is still developing and many personal health factors affect diet and health. Since subjects in the scientific studies referenced in this report may have had personal health and other factors different from those of tested individuals, results from these studies may not be representative of the results experienced by tested individuals. Further, some recommendations may or may not be attainable, depending on the tested individual's physical ability or other personal health factors. A limitation of this testing is that many of these scientific studies may have been performed in selected populations only. The interpretations and recommendations are done in the context of these studies, but the results may or may not be relevant to tested individuals of different or mixed ethnicities.

Vibrant Wellness makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Vibrant Wellness reports and other information do not constitute medical advice and are not a substitute for professional medical advice. Please consult your healthcare practitioner for questions regarding test results, or before beginning any course of medication, supplementation, or dietary changes.

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