DEMO DEMO

Name: DEMO DEMO Date of Birth: 1975-01-20 Biological Sex: Male

Age: 50 Height: Weight:

Fasting: NOT FASTING

Telephone: 000-000-0000

Street Address:

Email:

Provider Information

FINAL REPORT

Practice Name: DEMO CLIENT, MD Provider Name: DEMO CLIENT, MD

Phlebotomist: 0

Telephone: 000-000-0000 Address: 3521 Leonard Ct, Santa

Clara, CA 95054

Report Information

Current Result Previous Result

In Control Moderate Risk

Specimen Information

Sample Type **Received Time Collection Time** Report Final Report Date 2023-10-26 20:09 (UTC) 2023-10-27 17:54 (UTC) Neural Zoomer Plus - P2 Serum 2023-11-03 18:31 (UTC)

Accession ID: 2853982080



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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		Referen	ce Range:	10.1-20 Risk: >20
Optical and Autonomic Nervous System Disorders	Current (IgG + IgA)	lgM	Previous (IgG + IgA)	lgM
Anti-Aquaporin4	>30	2.3		

Aquaporin4 (AQP4) is the most abundant water channel in the brain, spinal cord, and optic nerve. It controls brain water homeostasis. AQP4 is found in the astrocytic endfeet and ependymal cells. AQP4 controls bidirectional fluid exchange. It is also involved in brain inflammation. Antibodies against AQP4 are associated with demyelinating lesions in the brain characterized by symptoms like muscle weakness, muscle stiffness, spasms, sensory changes, slurred speech, and vision-related conditions. Also, high levels of AQP4 antibodies are associated with neuromyelitis optica spectrum disorder. Since human AQP4 shows cross-reactivity with corn and soybean aquaporins, consider ordering Vibrant's Lectin Zoomer panel for a comprehensive assessment.

Brain Inflammation	Currer (IgG + IgA)	nt IgM	(IgG ·	+ IgA)	IgM
Anti-AMPA receptor	25.8	2.5			

AMPA receptor (AMPAR) is involved in excitatory neural impulse transmission, where it responds to the neurotransmitter glutamate. It is widely distributed in the central nervous system and brings about fast excitatory synaptic transmission. AMPAR plays a role in learning and memory. Anti-AMPAR antibodies are associated with symptoms like fever, seizures, headache, movement disorders, sensitivity to light and/or sound, neck stiffness, and loss of consciousness. Progression of these symptoms can lead to conditions like encephalitis, seizures, memory impairment, or psychosis.

Anti-Glycine receptor >3.7

Glycine receptors are inhibitory receptors present in the brainstem and the spinal cord. Its action leads to inhibition in neurotransmission. Antibodies against glycine receptors are seen to be associated with symptoms like muscle spasms, stiffness, and exaggerated startle responses. These symptoms could progress to conditions like hyperekplexia, rigidity, spasms, and myoclonus. They may also be accompanied by optic neuritis and cognitive decline. Anti-glycine receptor is also seen in patients with epilepsy.

Anti-Contactin-Associated Protein-like 2 >30

Contactin-associated protein occurs at the paranodal junction, which is the junction between neurons and their corresponding glial (assistive, non-neuronal) cells. It has various functions but is mainly involved with nerve cell conduction. Anti-contactin-associated protein-like 2 (CASPR2) antibodies are associated with symptoms like anxiety, depression, irritability, mental confusion, and hallucinations, which could lead to limbic encephalitis in severe cases. CASPR2 antibodies are also seen to give rise to symptoms like muscle stiffness, abnormal muscle contractions, cramps, delayed muscle relaxation and increased sweating. Severe progression of this condition could lead to acquired neuromyotonia.

Anti-Dopamine receptor 1 >30

Dopamine 1 receptor (D1R) is the most abundant dopamine receptor. It gets activated by the neurotransmitter dopamine. Dopamine receptors play an essential role in daily life functions, of which D1R is responsible for memory, attention, impulse control, regulation of renal function, and locomotion. Neuropsychiatric and movement disorders are associated with autoantibodies against D1R. D1R is also associated with the pathogenesis of Parkinson's disease (PD).

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Neural Zoomer Plus-Summary

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

 Brain Inflammation
 (IgG + IgA)
 Current
 IgM
 (IgG + IgA)
 Previous
 IgM

 Anti-Dopamine receptor 2
 12.3
 3.0

Dopamine 2 receptor (D2R) is involved in various functions like locomotion, attention, sleep, memory, and learning. It is activated by the neurotransmitter dopamine. D2R is involved in the neurotransmission of motor control. Children with D2R antibodies develop 'basal ganglia encephalitis', a condition with prominent movement disorders including parkinsonism, dystonia (involuntary muscle contraction), and/or chorea (abnormal involuntary movement disorder). It is also accompanied by neuropsychiatric features like obsessive-compulsive disorder, psychosis, and emotional lability.

Infections	Curre IgG	ent IgM	IgG Previous IgM		
Epstein Barr Virus VCA gp125	21.4	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).

Streptococcal A 29.3 4.5

Group A Streptococcal infection is caused by a bacteria known as group A (beta-haemolytic) streptococcus. This infection is prevalent among children. It results in sore throats (pharyngitis), scarlet fever, or impetigo (school sores). Antineuronal Anti-Streptococcal A antibodies are associated with Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections (PANDAS) characterized by tics, Tourette syndrome, or pediatric obsessive-compulsive disorder. These antibodies could also react with brain proteins to give rise to various neuropsychiatric conditions.

Epstein Barr Virus EBNA1 15.6 6.8

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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Neural Zoomer Plus		Refer	ence Range: In Control: ≤10 Moderate: 10.1-20 Risk:
Demyelination Antigens	Current (IgG + IgA)	lgM	(IgG + IgA) Previous IgM
Anti-Tubulin	9.4	3.7	
Anti-Myelin basic protein	8.7	2.7	
Anti-Myelin oligodendrocyte glycoprotein	6.0	3.6	
Anti-Myelin proteolipid protein	6.5	2.9	
Anti-Neurofascin	6.2	3.1	
Anti-MAG	7.3	2.2	
Blood Brain Barrier Disruption	Current (IgG + IgA)	IgM	(IgG + IgA) Previous IgM
Anti-s100b	8.6	2.3	
Anti-Glial fibrillary acidic protein	7.1	3.8	
Anti-Microglia	9.3	4.1	
Anti-Glucose regulated protein 78	8.5	2.9	
Optical and Autonomic Nervous System Disorders	(IgG + IgA) Current	lgM	Previous (IgG + IgA) IgM
Anti-Neuron specific enolase	7.0	3.4	
Anti-Aquaporin4	>30	2.3	
Anti-Recoverin	6.9	3.2	
Anti-CV2	9.5	2.6	
Peripheral Neuropathy	(IgG + IgA) Current	lgM	(IgG + IgA) Previous IgM
Anti-GM1	8.6	3.4	
Anti-GM2	0.5	1.9	
Anti-Hu	7.8	3.4	
Anti-Ri	4.5	3.8	
Anti-Amphiphysin	9.0	2.7	

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Neural Zoomer Plus		Refere	ence Range: In Control: ≤10 Moderate: 10.1-20 Risk: >20
Neuromuscular disorders	(IgG + IgA) Current	lgM	(IgG + IgA) Previous IgM
Anti-Acetylcholine receptors	7.9	3.1	
Anti-Muscle specific kinase	7.1	2.7	
Anti-Voltage gated calcium channels	5.8	2.2	
Anti-Voltage gated potassium channels	0.5	2.7	
Anti-Titin	6.3	2.8	
Brain Autoimmunity	(IgG + IgA) Current	lgM	(IgG + IgA) Previous IgM
Anti-Cerebellum	3.8	5.6	
Anti-Purkinje cell	6.7	4.7	
Anti-Yo	4.6	2.8	
Anti-Amyloid beta (25-35)	6.0	2.7	
Anti-Amyloid beta (1-42)	6.2	3.6	
Anti-RAGE peptide	6.7	2.8	
Anti-Tau	6.0	2.8	
Anti-Glutamate	8.7	3.0	
Anti-Dopamine	5.3	2.9	
Anti-Hydroxytryptamine	6.2	3.0	
Anti-Alpha-synuclein	6.3	2.8	
Anti-α1 a <mark>nd β2 adrenergic recepto</mark> rs	5.9	3.3	
Anti-Endothelin A receptor	4.0	2.9	
Brain Inflammation	(IgG + IgA) Current	lgM	(IgG + IgA) Previous IgM
Anti-NMDA receptor	7.3	3.3	
Anti-AMPA receptor	25.8	2.5	
Anti-GABA receptors	5.9	3.9	

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Neural Zoomer Plus			Re	eference Range: In Control: ≤10 Moderate: 10.1-20 Risk: >
Brain Inflammation	(IgG + IgA)	Current	lgM	(IgG + IgA) Previous IgM
Anti-Dipeptidyl aminopeptidase like protein 6	8.5		2.5	
Anti-Glycine receptor	>30		3.7	
Anti-Neurexin 3	8.3		3.4	
Anti-Contactin-Associated Protein-like 2 Antibodies	>30		3.9	
Anti-Leucine-rich glioma-inactivated protein 1 (Anti-LGI1)	7.3		3.9	
Anti-Ma	4.8		2.8	
Anti-Dopamine receptor 1	>30		3.1	
Anti-Dopamine receptor 2	12.3		3.0	
Infections	lgG	Current	lgM	IgG Previous IgM
Cytomegalovirus EIA Antigen	2.7		5.9	
Cytomegalovirus GlyB	2.4		6.6	
Cytomegalovirus p150	1.3		4.5	
Cytomegalovirus p28	3.0		1.5	
Cytomegalovirus p52	4.5		7.0	
Cytomegalovirus p65	3.6		7.2	
Cytomegalovirus p38	3.1		2.4	
Epstein B <mark>arr Vi</mark> rus EA Antigen	6.4		4.4	
Epstein B <mark>arr Virus EBN</mark> A1	15.6		6.8	
Epstein Barr Virus VCA gp125	21.4		2.1	
Epstein Barr Virus p18	6.2		7.4	
Epstein Barr Virus p23	8.9		1.1	
HSV-1	1.3		3.2	
HSV-2	1.3		4.7	

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Infections	Current IgG	: IgM	Previou IgG	ls IgM
HHV-6	7.2	4.4		
HHV-7	2.6	4.0		
Streptococcal A	29.3	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.

