

PATIENT

NAME: **TESTR TEST** GENDER: **Male**
DATE OF BIRTH: **10/22/1990** AGE: **30**

ACCESSION ID: **2010260681**
SPECIMEN COLLECTION TIME: **10-25-2020 19:43**
SPECIMEN RECEIVED TIME: **10-26-2020 13:46**
FINAL REPORT TIME: **08-24-2021 17:36**
FASTING: **FASTING**

PROVIDER

PRACTICE NAME: **Vibrant IT3 Practice**
PROVIDER NAME: **Vibrant IT3, MD (999997)**
ADDRESS: **1600 AMPHITHEATRE PKWY, MOUNTAIN VIEW, CA- 94043.**
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The comments in this report are meant only for informational purposes and do not constitute medical advice.
Please consult your physician for any medication, treatment or life style management.

Vibrant Wellness Test Index

Infections Summary

Pg 1

Tickborne Zoomer

Pg 2

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Your **Vibrant Wellness TickBorne panel** results are enclosed. These results are intended to aid in the diagnosis of tickborne diseases by your healthcare provider.

The Vibrant Tickborne Diseases panel tests for IgG and IgM antibodies for Borreliosis/Lyme disease as well as co-infection(s) and opportunistic infections with other tick-borne illnesses along with detection of DNA of the species causing these infections. The Vibrant ImmunoChip test is a semiquantitative assay that detects IgG and IgM antibodies in human serum. The PCR Test is a real-time PCR Assay designed for qualitative detection of infectious group-specific DNA in clinical samples.

Interpretation of Report: The test results of antibody levels to the individual antigens are calculated by comparing the average intensity of the individual antibody to that of a reference population and cut-off chosen for each protein. Reference ranges have been established using a well characterized set of more than 300 serum samples and antibodies to specific bacteria tested. The results are displayed as **In Control** (≤ 10.0), **Moderate** ($10.1 \sim 20.0$), or **High** (≥ 20.1) for each antigen tested. The PCR panel reports results as **Detected** or **Not Detected**. For each species tested Interpretation for the results is obtained by using all the antigens tested and provided below the panel results. As with all testing, results should be interpreted in light of a patient's history, physical examination, and/or results of other diagnostic testing

The Test Summary page at the start of the report shows the antigens for which positivity was seen in the patient serum across IgG and IgM respectively, the additional column labelled PCR shows the results of the nucleic acid testing as well. While the summary report provides a quick snapshot of the complete test, providers are encouraged to review the complete detailed report for more description on the analytes themselves.

Test interpretation for *Borrelia burgdorferi* based on multiple bands is reported according to the CDC/IDSA criteria as well as Alternate criteria established by running clinical samples. By CDC criteria Lyme IgM is reported positive if VlsE1 or C6 peptide or WCS (Whole cell sonicate) is positive and two of the following three antigens are positive: 23-25kDa, 39kDa and 41kDa. In the alternate criteria IgM is reported positive if VlsE1 or C6 peptide or WCS (Whole cell sonicate) is borderline or positive and any two of the following antigens are borderline or positive: 23-25kDa, 31kDa, 34kDa, 39kDa, 41kDa and 83-93kDa. This interpretation is based on internal validation studies.

Similarly, by CDC criteria Lyme IgG is reported positive if VlsE1 or C6 peptide or WCS (Whole cell sonicate) is positive and any five of the following ten antigens are positive: 18kDa, 23-25kDa, 28kDa, 30kDa, 39kDa, 41kDa, 45kDa, 58kDa, 66kDa and 83-93kDa. In the alternate criteria IgG is reported positive if VlsE1 or C6 peptide or WCS is borderline or positive and two of the following antigens are borderline or positive: 18kDa, 23-25kDa, 28kDa, 30kDa, 31kDa, 34kDa, 39kDa, 41kDa, 45kDa, 58kDa, 66kDa and 83-93kDa. The alternate criteria are based on internal validation studies.

The Vibrant Wellness platform provides tools for you to track and analyze your general wellness profile. Testing for the TickBorne Diseases panel is performed by Vibrant America, a CLIA certified lab CLIA#:05D2078809 and Vibrant Genomics LLC, 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 accept 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 physician for medication, treatment, or lifestyle management. This product is not intended to diagnose, treat, or cure any disease.

Comments provided by Vibrant Wellness are for educational purposes only and not intended to be used as or substituted for medical advice. We do not treat or cure medical conditions. Vibrant Wellness does not replace the care of a medical practitioner or counselor and does not recommend self-diagnosis or self-medication. Depending on the nature of your testing, if you receive a high risk or moderate risk result, confirmatory testing may be recommended and you will be encouraged to seek medical attention for additional follow up. Vibrant Wellness does not provide clinical consultations for Lyme Disease treatments.

Vibrant Wellness shall not be liable to you or anyone else for loss or injury caused in whole or part by procuring, compiling, interpreting, delivering, or reporting information through this report. Also, in no event shall Vibrant Wellness be held liable to you or anyone else for any decisions made or action taken or not taken by you in reliance on such information.

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
TEST	TESTR	MALE	1990-10-22	2010260681	10-25-2020 19:43

Cytomegalovirus

Cytomegalovirus is a common virus that infects people of all ages. Around 80% of adults in the United States are infected with virus. This virus has the ability to remain alive yet dormant for the life of the human host, but it can become active when the immune system is weakened , .

LAST NAME	FIRST NAME	GENDER	DATE OF BIRTH	ACCESSION ID	DATE OF SERVICE
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Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
Cytomegalovirus EIA Antigen	3.0	6.0	10.0	1.0
Cytomegalovirus GlyB	20.0	20.0	6.0	8.0
Cytomegalovirus p150	4.0	9.0	9.0	<0.1
Cytomegalovirus p28	5.0	8.0	6.0	6.0
Cytomegalovirus p52	30.0	20.0	10.0	2.0
Cytomegalovirus p65	<0.1	1.0	<0.1	1.0
Cytomegalovirus p38	<0.1	1.0	<0.1	1.0

Epstein Barr Virus

The Epstein-Barr virus, also called human herpesvirus 4 (HHV-4), is one of the causes of infectious mononucleosis (glandular fever). It is a double-stranded, enveloped, linear DNA virus. Lyme disease and infectious mononucleosis are common illnesses that share similar clinical presentations and hence its useful to test together.

Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
Epstein Barr Virus EA Antigen	3.0	1.0	1.0	5.0
Epstein Barr Virus EBNA1	8.0	8.0	7.0	2.0
Epstein Barr Virus VCA gp125	6.0	4.0	2.0	4.0
Epstein Barr Virus p18	2.0	8.0	2.0	5.0
Epstein Barr Virus p23	1.0	1.0	5.0	7.0

Parvovirus B19

Lyme disease and Parvovirus B19 infections produce arthritis, rashes, and a systemic illness that may be thought to represent a chronic rheumatic disease. Cases of co infections have also been reported in literature. Additionally, it has been shown to be a good candidate for differential diagnosis in cases of arthropathy where Lyme disease has been suspected.

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Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
Parvovirus B19 VLP VP2	9.0	1.0	6.0	7.0
Parvovirus B19 VLP VP1/Vp2 Co Capsid	2.0	10.0	7.0	6.0

Parvovirus B19 PCR		
Test Name	Current Result	Previous Result (09/26/2020)
Parvovirus B19	NOT DETECTED	NOT DETECTED

Toxoplasma gondii

Toxoplasma gondii is a protozoan parasite that infects most species of warm-blooded animals, including humans, and causes the disease toxoplasmosis. Tick based transmission has been increasingly considered and evidence indicates that T. gondii could be a potentially unrecognized tick-borne pathogen spreading toxoplasmosis. The parasite forms cysts that can affect almost any part of the body often your brain and muscle tissue of different organs, including the heart. The immune system keeps the parasites in check in an inactive state however, if it is weakened by disease or certain medications, the infection can be reactivated, leading to serious complications.

Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
Toxoplasma gondii Crude Extract	2.0	2.0	2.0	2.0
Toxoplasma gondii MIC3	7.0	7.0	1.0	6.0
Toxoplasma gondii p24	3.0	4.0	1.0	9.0
Toxoplasma gondii p29	10.0	1.0	7.0	7.0
Toxoplasma gondii p30	6.0	<0.1	1.0	9.0

Toxoplasma gondii PCR		
Test Name	Current Result	Previous Result (09/26/2020)
Toxoplasma gondii	NOT DETECTED	NOT DETECTED

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Herpes simplex virus 1

Herpes simplex virus 1 is a member of the herpesvirus family that can infect humans. It mostly produces cold sores and is ubiquitous and contagious. As a neutrophilic and neuroinvasive virus, HSV-1 persists in the body in its latent form and is hiding from the immune system in the cell bodies of neurons. Seropositivity to HSV-1 antibodies have been reported with increased risk for Alzheimer's disease. Disseminated Lyme Disease has been shown to be presenting with nonsexual acute genital ulcers and Lyme disease should be considered in women presenting with acute-onset genital ulcers.

Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
HSV-1	6.0	5.0	8.0	6.0

Herpes simplex virus 2

Herpes simplex virus 2 is a member of the herpesvirus family that can infect humans. It is the primary cause of genital herpes. HSV2 can persist in the body in its latent form. Recent primary HSV-2 infection should be considered as a cause of cross-reacting IgM-class anti-B. burgdorferi antibody.

Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
HSV-2	3.0	9.0	7.0	<0.1

Human herpesvirus 6

Human herpesvirus 6 is a herpes family virus that can stay in your body for life usually in a dormant state. Most commonly it can affect people who have a compromised immune system. Research has linked HHV-6 with various neurological conditions. It has also been an important candidate in the chronic fatigue syndrome population.

Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
HHV-6	6.0	5.0	3.0	8.0

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Human herpesvirus 7

Human herpesvirus 7 is a herpes family virus that can stay in your body for life usually in a dormant state. It is ubiquitous worldwide and nearly 70% of all children will be exposed to the virus by the age of 4. DNA of the virus has been found in the CD4+ T cells of healthy adults which is indicative of the latency.

Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
HHV-7	1.0	9.0	3.0	10.0

Streptococcal A

Antibodies to Streptococcal A are indicative of current or recent strep infection. In PANDAS (Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections) researchers suggest that antibodies produced to the infection may lead to the PANDAS symptoms. Strep bacteria are very ancient organisms that survive in the human host by hiding from the immune system as long as possible. They hide themselves by putting molecules on their cell wall so that they look nearly identical to molecules found on the child's heart, joints, skin, and brain tissues. This hiding is called "molecular mimicry" and allows the strep bacteria to evade detection for a long time. However, the molecules on the strep bacteria are eventually recognized as foreign to the body and the child's immune system reacts to the molecules by producing antibodies. Because of the molecular mimicry by the bacteria, the immune system reacts not only to the strep molecules but also to the human host molecules that were mimicked; antibodies "attack" the mimicked molecules in the child's own tissues. These antibodies that react to both the molecules on the strep bacteria and to similar molecules found on other parts of the body are an example of "cross-reactive" antibodies. Studies at the National Institute of Mental Health (NIMH) and elsewhere have shown that some cross-reactive antibodies target the brain—causing OCD, tics, and the other neuropsychiatric symptoms of PANDAS.

Test Name	IgG		IgM	
	Current	Previous (09/26/2020)	Current	Previous (09/26/2020)
Streptococcal A	<0.1	1.0	<0.1	1.0

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Risk and Limitations

This test has been developed and its performance characteristics determined by Vibrant America LLC., a CLIA certified lab. These assays have not been cleared or approved by the U.S. Food and Drug Administration.

Vibrant Tickborne panel does not demonstrate absolute positive and negative predictive values for any condition. The test results should be considered as one component of the physician's clinical assessment of the individual. Clinical history and current symptoms of the individual must also be considered by the healthcare provider prior to any interventions.

Tickborne testing is performed at Vibrant America, a CLIA certified laboratory and utilizes ISO-13485 developed technology. Vibrant America has 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 antibody due to circumstances beyond Vibrant's control. Vibrant may re-test a sample in order 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.

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