

# The IGeneX Advantage

## OUTPERFORMING OTHER LABS IN THE US AND WORLDWIDE

For over 30 years, IGeneX has been at the forefront of diagnostic testing for Lyme disease and other tick-borne diseases. In recent years, IGeneX has continued to lead the way through continued research and development from a dedicated team of tick-borne disease experts.

This relentless focus and commitment has produced the industry's most effective tests for tick-borne diseases.

### IGENE X IS FULLY CERTIFIED

IGeneX is certified by CLIA to perform tests on human samples in all 50 states. Many competing labs are not. IGeneX also holds licenses and permits for individual states that require separate state licensures. Including New York. This demonstrates that IGeneX meets the quality of standards at state and federal levels.



## NO OTHER LAB CAN DO WHAT IGENEX CAN DO

	IGeneX	Domestic Labs	International Labs
cePCR (Culture-Enhanced PCR) Testing for Lyme disease, TBRF, Bartonella, Babesia, Rickettsia, Ehrlichia and Anaplasma*	✓	✗	✗
Lyme Multi-Species ImmunoBlots that detect the Lyme <i>Borreliae</i> genus and speciate to <i>B. burgdorferi</i> B31, <i>B. burgdorferi</i> 297, <i>B. californiensis</i> , <i>B. mayonii</i> , <i>B. afzelii</i> , <i>B. garinii</i> , <i>B. spielmanii</i> , <i>B. bissettii</i> and <i>B. valaisiana</i>	✓	✗	✗
TBRF Multi-Species ImmunoBlots that detect the TBRF <i>Borreliae</i> genus and speciate to <i>B. hermsii</i> , <i>B. miyamotoi</i> and <i>B. turicatae</i>	✓	✗	✗
Babesia Multi-Species ImmunoBlots that detect the Babesia genus and speciate to <i>B. microti</i> and <i>B. duncani</i>	✓	✗	✗
Bartonella Multi-Species ImmunoBlots that detect the Bartonella genus and speciate to <i>B. henselae</i> , <i>B. quintana</i> , <i>B. elizabethae</i> and <i>B. vinsonii</i>	✓	✗	✗
Broad Coverage Assays for Lyme and TBRF that detect early (IgM) and late (IgG) stage infection	✓	✗	✗
Babesia FISH (Fluorescence in situ hybridization)	✓	✗	✗
Bartonella FISH*	✓	✗	✗
IgXSpot T-Cell*	✓	✗	✗

\* Not available in New York

# IGENEX IS THE MOST COMPREHENSIVE LAB

## IGENEX TESTS FOR MORE DISEASES

Ticks can carry many diseases in addition to Lyme disease. These diseases are known collectively as co-infections. IGeneX provides multiple types of tests for each disease to cover the full spectrum of possible illnesses.



### Lyme Disease

Lyme disease is the most well-known tick-borne illness and one of the fastest growing infectious diseases in the United States, infecting 470,000 people annually in the US.



### Tick-Borne Relapsing Fever (TBRF)

It looks like and behaves like Lyme. Lyme and TBRF sufferers display many similar symptoms, often leading to misdiagnosis. Therefore, it is important to test for both Lyme and TBRF.



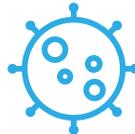
### Bartonellosis

Bartonellosis is primarily associated with fleas, lice, and ticks. It can cause serious diseases in humans, such as Cat scratch disease (CSD), endocarditis, trench fever, and Carrion's disease.



### Babesiosis

Babesiosis is transmitted through the bite of an infected tick, but unlike other tick-borne diseases, it is caused by microscopic parasites that infect red blood cells. This makes it similar to malaria.



### Rickettsiosis

Rickettsiosis is classified by two main biogroups: the spotted fever group and the typhus group. The symptoms include fever, headache, rash, nausea, vomiting, abdominal pain, chills, and loss of appetite.



### Ehrlichiosis / Anaplasmosis

Ehrlichiosis and Anaplasmosis are similar diseases caused by intracellular bacteria. A clinical diagnosis is difficult because symptoms vary greatly. In general, Anaplasmosis leads to milder disease than Ehrlichiosis.

## IGENEX UTILIZES MORE TESTING METHODS

Comprehensive testing at IGeneX provides patients with multiple options and the best chance at obtaining an accurate assessment at every stage of infection. The ImmunoBlots and IFAs are serologic tests, detecting antibodies and the response to an infection. For those who do not produce antibodies or are seronegative, IGeneX offers PCR, cePCR™, IgXSpot and FISH testing.



### ImmunoBlots

The ImmunoBlot is the most sensitive and specific test for Lyme, TBRF, Babesia, and Bartonella. It's considered the gold standard in testing and is superior at all stages of disease.



### PCR

PCR (polymerase chain reaction) directly identifies pathogens for all of the major tick-borne diseases. It works on blood, urine, or miscellaneous samples.



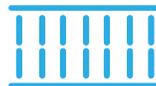
### IFA

The immunofluorescent assay (IFA) indirectly detects pathogen-specific IgG or IgM antibodies in patient serum for all the major tick-borne diseases.



### IgXSpot

IgXSpot is an enzyme-linked immunospot assay that detects human T cells reactive to pathogen-specific antigens in vitro.



### FISH

The Fluorescence in situ hybridization (FISH) test provides a significant increase in sensitivity and specificity over Geimsa-stained smears for the presence of bacteria, fungi, and parasites.



### Culture Testing

cePCR (Culture Enhanced PCR) increases sensitivity over regular PCR by first culturing a sample for two weeks. It's considered the gold standard for diagnosis of tick-borne illnesses.