

LYME DISEASE TESTING

Matching the best technology to the appropriate stage of the disease

Patients with Lyme-like symptoms are often misdiagnosed. The sensitivity of tests varies greatly depending upon how long an individual has been infected and on the type of clinical manifestations. If a patient has received antibiotics in the early stage of the disease, antibody levels may be too low to be detected or nonexistent, making the standard ELISA/Western Blot testing protocol recommended by the CDC less effective. In addition, Lyme bacteria are not always present in the blood, or patients can be infected with a strain that is not covered in testing. Therefore, multiple laboratory tests, using varying detection techniques, should be used to support the proper diagnosis of Lyme Disease.

T-Cell and Antibody Response



A small percentage of patients produce T-cells during the middle stage, with a spike in the late

stage of the disease

A small percentage of patients produce IgM antibodies throughout the entire stage of the disease.

Lyme Disease Test	Early Stage (1 - 6 weeks)	Mid-Stage (6 weeks - 1 year)	Chronic (1+ years)
IgXSpot The IgXSpot is an Enzyme-Linked ImmunoSpot (ELISPOT) assay that detects human T-cells reactive to <i>Borrelia</i> /pathogen-specific antigens in vitro.	Х		Х
LDA Lyme Dot-Blot Assay (LDA) is a qualitative immunoassay for the direct detection of <i>B. burgdorferi</i> -specific antigens in a patient urine sample.	Х		Х
PCR The PCR test is an amplified nucleic acid assay that detects pathogen-specific DNA sequences in a clinical sample.	Х	Х	Х
Western Blot The Western Blot is a qualitative immunoassay in which antibodies specific to the <i>B. burgdorferi</i> antigens on a membrane strip are visualized.		Х	Х
IGeneX ImmunoBlot The IGeneX IgM and IgG ImmunoBlots are used to determine the presence of pathogen-specific antibodies. They have better sensitivity than the current Western Blot, since the ImmunoBlot is designed to detect antibodies to <i>B. burgdorferi</i> variants.		Х	Х
ELISA ELISA (Enzyme-Linked Immunosorbent Assay) is a plate-based assay technique designed for detecting and quantifying pathogen-specific antibodies.		Х	Х
LSA Lyme screen assay indirectly detects pathogen-specific IgG or IgM antibodies in patient serum.		Х	Х