



Health Diagnostics and Research Center
(formerly Vitamin Diagnostics, Inc.)

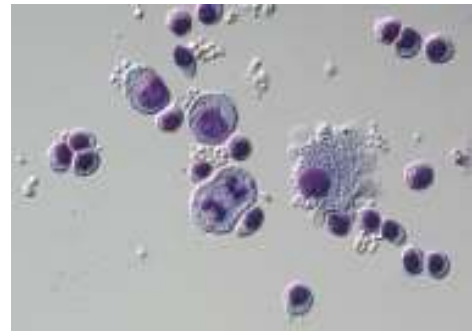
South Amboy Medical Center
540 Bordentown Ave.
South Amboy, New Jersey 08879
USA

Lymphocyte Transformation Test (LTT-MELISA®) for Lyme Borreliosis

Detection of cellular immunoreactivity to *Borrelia*-specific antigens

Background

Lyme Borreliosis (LB) is caused by tick-borne infection with the spirochete *Borrelia burgdorferi* identified in 1982 and is characterized by dermatological (erythema chronicum migrans), arthritic, and neurological manifestations. Conventional laboratory diagnosis involves demonstration of *Borrelia* antibodies in ELISA followed by confirmation of positive or unclear results in Western Blot. However, due to cross-reactivity with antigenically-related microorganisms (e.g. *treponema*, EBV), delayed or failed antibody production, or extended IgM persistence, serological diagnosis alone is often ambiguous. Laboratory diagnosis can be improved with a modified lymphocyte transformation test (LTT) in which the T-cell immune response (lymphoblast transformation and proliferation) to primarily recombinant, *Borrelia*-specific antigens can be detected (³H-thymidine incorporation) and evaluated.



A positive reaction in the LTT-MELISA® for Lyme Borreliosis demonstrates current active infection with *Borrelia burgdorferi*. The test improves laboratory diagnosis of LB by confirming an active infection in sero-negative, -ambiguous or -positive patients with clinical suspicion of LB and by providing an early marker for successful antibiotic therapy (Valentine-Thon et al., Diagn Microbiol Infect Dis 57:27-34, 2007).

Medical indication

- diagnosis of LB in sero-negative, -ambiguous or -positive patients with clinical suspicion of LB
- identification of patients with chronic (therapy-resistant) LB
- early confirmation of therapeutic success

Material required

- 25 ml blood in 3 x special Citrate Tubes (please request from us in advance!), non-refrigerated, sent to our lab within 24 hours (overnight service with, for example, FEDEX)
- Request Form with relevant anamnestic data

Method: Lymphocyte Transformation Test (LTT) in the validated MELISA® modification

Cost: please contact lab

Further information: Tel. +732-721-1234 Dr. Elizabeth Valentine-Thon