



# Broad Coverage Ab Assay

## Lyme and TBRF

### PURPOSE

Borreliosis, a vector-borne disease caused by a bacterium-*Borrelia*: The Lyme *Borreliae* group and the Tick-Borne Relapsing Fever (TBRF) *Borreliae* group. The Lyme *Borreliae* group is transmitted by hard ticks (*Ixodes*) and the TBRF *Borreliae* group is transmitted by hard (*Ixodes*) and soft (*Ornithodoros*) ticks.

For decades, Lyme-like symptoms were believed to be a manifestation of Lyme disease caused by the Lyme *Borreliae* group only. However, we now know that the TBRF *Borreliae* group can also cause Lyme-like symptoms.

The Lyme *Borreliae* group and the TBRF *Borreliae* group can cause Borreliosis, which is often confused with Multiple Sclerosis, Chronic Fatigue Syndrome, Osteoarthritis and ALS or Lou Gehrig's disease. The Broad Coverage Antibody (BCA) Assays for Lyme *Borreliae* and TBRF *Borreliae* are designed to detect antibodies for each specific group of antigens in human serum. Both tests are very specific and inclusive for the Lyme *Borreliae* group and the TBRF *Borreliae* group.

### PRINCIPLE

The Lyme Broad Coverage Antibody Assay is a qualitative test designed to detect IgM/IgG antibodies to Lyme *Borreliae* group-specific antigens in human serum. The TBRF Broad Coverage Antibody Assay is a qualitative test designed to detect IgM/IgG antibodies to TBRF *Borreliae* group-specific antigens in human serum.

A positive test suggests exposure to the Lyme *Borreliae* group or the TBRF *Borreliae* group, and should be used in conjunction with patient clinical symptoms and history. The BCA Assay is a simple and cost-effective test, which gives either a positive or negative result. For specific protein or band information, an ImmunoBlot IgM or IgG test should be ordered to provide more information and possible speciation of the *Borrelia*.

### PERFORMANCE CHARACTERISTICS

The sensitivity of the Lyme BCA Assay is 90%, and the specificity is 97%; and for the TBRF BCA Assay, the sensitivity is 90% and the specificity is 98% as compared to Lyme and TBRF ImmunoBlots respectively.

### ADVANTAGES

- Far broader and more inclusive of *Borrelia* species than standard serologies
- Detects antibodies to *Borrelia* species from North American, European and Australian strains
- Better than two-tier ELISA/WB and two-tier ELISA
- Provides a simple, cost-effective, yes/no result with no complicated interpretation necessary

SAMPLE REQUIREMENT: 0.5 ml serum

TEST NUMBER: 601 Broad Coverage Lyme Ab Assay  
602 Broad Coverage TBRF Ab Assay

CPT CODE: 0042U, 0044U