

Borrelia Afzelii Antigen

Cat. No. BOR-025 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Borrelia afzelii antigen (strain PKo), inactivated by detergent treatment. Harvested bacteria are washed and detergent solubilized to produce a cytoplasmic extract enriched with lipoproteins and outer surface proteins (OSPs). QC serum panel (multiple negative, borderline and positive sera) within defined reactivity range in *Borrelia burgdorferi* IgG and IgM ELISA. For immunoassay development or other applications.

Background

Lyme disease is a multisystem disorder caused by three species of the tick-borne spirochete *Borrelia burgdorferi sensu lato*; namely *Borrelia burgdorferi sensu stricto* (United States and Europe), *Borrelia garinii* and *Borrelia afzelii* (Europe). The disease was first recognized in Lyme, Connecticut, United States in 1975, and *Borrelia burgdorferi* was described as the causative organism in 1982. However, the clinical manifestations of the disorder were previously described by Afzelius in Europe in the early 1900's (Zouyan & Coburn, 2017).

Borrelia are loosely coiled, spiral, microaerophilic bacteria with 3 to 10 loose coils arranged in a helical shape. The cells are 10 to 30 µm long and 0.2 to 0.5 µm wide and contain at least seven periplasmic flagella that are responsible for the organism's motility (Wormser, 2012). *Borrelia burgdorferi sensu lato* (or *B. burgdorferi* in the general sense) consists of 14 closely related genospecies. However, the human infection is caused primarily by three genospecies. In the United States, *B. burgdorferi sensu stricto* (*B. burgdorferi* in the strict sense), is the sole cause of the disease, whereas *Borrelia afzelii* and *Borrelia garinii* are the primary causes in Europe and Asia (Steere, 2015). Each of these genospecies is associated with different enzootic lifecycles and clinical manifestations. *Borrelia afzelii* is mostly associated

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with skin manifestations, whereas *B. garinii* is considered to be the most neurotropic and *B. burgdorferi* s.s. the most arthritogenic. These genospecies are associated with different vertebrate host species. *Borrelia afzelii* is associated with rodents, whereas *B. garinii* is associated with birds (van Duijvendijk et al., 2015).

Formulation

The antigen is presented in phosphate buffered saline containing 1 % n-octyl- β -D-glucopyranoside.

Notes

This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

ClassID 1

Infectious Disease

GENE INFORMATION**Synonyms**

Borrelia Afzelii

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