

**Monoclonal antibody against Outer surface protein B (OspB)
Borrelia burgdorferi [LA-27.1]
 Product No. ADG0085L**

Description

Lyme disease is the most common vector-borne disease in North America and Europe. The causative agent *Borrelia burgdorferi* is a bacterium that is maintained in an enzootic cycle between *Ixodes* ticks and a large range of mammals. The OspB gene is localized on the same 49-kb linear plasmid as OspA, and both genes are transcribed from a common promoter. *B. burgdorferi* upregulates OspA and OspB during entry into ticks. OspA and OspB contribute to the colonization of bacterium within the vector gut and facilitate survival of *B. burgdorferi* in ticks.

Properties

The monoclonal antibody ADG0085L (clone LA-27.1) is a murine monoclonal antibody, subclass IgG₁ recognizing OspB. Mice were immunized with cell lysates of *Borrelia burgdorferi*. The antibody has been purified from cell culture supernatant using Protein G affinity chromatography.

Presentation

Vial containing 1 mg purified antibody in PBS pH 7.4. The concentration is given on the vial label. Spin the vial briefly before opening.

Storage and Stability

Store the antibody at 2°-8°C. For long-term storage the antibody should be aliquoted and stored at -20°C or colder. It is recommended to avoid freeze-thaw cycles.

Applications**A. ELISA**

The antibody can be used as capture antibody in ELISAs. An antibody concentration of 1-10 µg/ml is recommended.

B. Westernblot

The antibody is suitable for Western blot analysis, detecting native and recombinant OspB following SDS-PAGE under reducing conditions. A primary antibody concentration of 1-10 µg/mL is recommended.

C. Immunocytochemistry

The antibody can be used for immunocytochemistry on paraformaldehyde fixed spirochetes and for cryo-electron tomography.

References

1. Characterization of *Borrelia burgdorferi* associated antigens by monoclonal antibodies. Kramer et al. *Immunobiol.* 1990; 181:357-366
2. Selection of an escape variant of *Borrelia burgdorferi* by use of bactericidal monoclonal antibodies to OspB. Coleman et al. *Infect. Immun.* 1992; 60(8):3098-3104
3. Nanoscopic localization of surface-exposed antigens of *Borrelia burgdorferi*. Lemgruber et al. *Microsc. Microanal.* 2015; 21(3):680-688
4. Complement-mediated *in vitro* bactericidal activity of monoclonal antibodies reactive with outer-surface-protein OspB of *Borrelia burgdorferi*. Cevenini et al. *FEMS Microbiol. Lett.* 1992; 69(2):147-152
5. Molecular analysis of linear plasmid-encoded major surface proteins, OspA and OspB, of the Lyme disease spirochete *Borrelia burgdorferi*. Bergström et al. 1989; 3(4):479-486
6. Selective association of outer surface lipoproteins with the lipid rafts of *Borrelia burgdorferi*. Toledo et al. 2014; 5(2):e00899-14

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Gerhart-Hauptmann-Str. 48
 69221 Dossenheim

Tel +49 6221 868023

Fax +49 6221 8680255

www.loxo.de - info@loxode

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