

Monoclonal antibody against Outer surface protein C (OspC) *Borrelia burgdorferi* [LA-C3.4] Product No. ADG0089L

Description

Osp C (Outer surface Protein C) is a major virulence factor of *Borrelia burgdorferi*, the causative agent of Lyme disease. OspC is detectable on spirochetes in ticks after engorgement, but also on spirochetes present in several mammalian tissues. OspC binds to an immunosuppressive tick saliva protein, termed Salp15, which allows the tick to evade and/or suppress host responses during engorgement for several days. The presence of OspC on *B. burgdorferi* in the mammalian host make it an attractive vaccine target antigen.

Properties

The monoclonal antibody ADG0089L (clone LA-C3.4) is a murine monoclonal antibody, subclass IgG₁ recognizing OspC. Mice were immunized with recombinant OspC antigen. The antibody has been purified from cell culture supernatant using Protein G affinity chromatography.

Presentation

Screw capped vial containing 1 mg of purified antibody in PBS pH 7.4. The IgG 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 OspC 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. Induction of an outer surface protein on *Borrelia burgdorferi* during tick feeding. Schwan et al. *Proc. Natl. Acad. Sci. USA* 1995; 92:2909-2913
2. Hepatitis B virus capsid-like particles can display the complete, dimeric outer surface protein C and stimulate production of protective antibody responses against *Borrelia burgdorferi* infection. Skamel et al. *J. Biol. Chem.* 2006; 281:17474-17481
3. Resolution of experimental and tick-borne *Borrelia burgdorferi* infection in mice by passive, but not active immunization using recombinant OspC. Zhong et al. *Eur. J. Immunol.* 1999; 29:946-957
4. The Lyme disease agent exploits a tick protein to infect the mammalian host. Ramamoorthi et al. *Nature* 2005; 436:573-577
5. Crystal structure of outer surface protein C (OspC) from the Lyme disease spirochete, *Borrelia burgdorferi*. Kumaran et al. *EMBO J.* 2001; 20:971-978
6. Immunological and molecular polymorphisms of OspC, an immunodominant major outer surface protein of *Borrelia burgdorferi*. Wilske et al. *Infect. Immun.* 1993; 61:2182-2191
7. Nanoscopic Localization of Surface-Exposed Antigens of *Borrelia burgdorferi*. Lemgruber et al. *Microsc. Microanal.* 2015; 21(03):680-688
8. Comparative cryo-electron tomography of pathogenic Lyme disease spirochetes. Kudryashev et al. *Mol. Microbiol.* 2009; 71(6):1415-1434

Hinweis/Note:

Der Packungsbeileger dient nur als erste Information. Der relevante Packungsbeileger liegt der Ware bei.

The datasheet is for information purposes only. The current datasheet will be enclosed with product shipment.

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