IMMBIOMED

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Monoclonal antibody against complement regulator-acquiring protein 2 (CRASP-2/CspZ) *Borrelia burgdorferi* [CP-1]

Product No. ADG0122L

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 enzoonotic cycle between *Ixodes* ticks and a large range of mammals. Adaptation to the diverse environmental conditions, including sophisticated means of evading the vertebrate hosts' immune system, in particular complement occurs at the first line of defense following infection. *Borrelia burgdorferi* spirochetes express up to five complement regulator-acquiring surface proteins (CRASPs) binding human complement regulators.

Properties

The monoclonal antibody ADG0122L (**clone CP-1**) is a murine monoclonal antibody, subclass IgG_{2a} recognizing CRASP-2. Mice were immunized with rec. CRASP-2/CspZ of *Borrelia burgdorferi*. 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 BbCRASP-2/CspZ 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.

References

1. Functional characterization of BbCHRASP-2, a distinct outer membrane protein of *Borrelia burgdorferi* that binds host complement regulators factor H and FHL-1. Hartmann et al. *Mol. Microbiol.* 2006; 61(5):1220-1236

2. Coordinated expression of *Borrelia burgdorferi* complement regulator-acquiring surface proteins during the Lyme disease spirochete's mammal-tick infection cycle. Bykowski et al. *Infect. Immun.* 2007; 75(9):4227-4236

3. *Borrelia burgdorferi* complement regulator-acquiring surface protein 2 (CspZ) as a serological marker of human Lyme disease. Kraiczy et al. *Clin. Vaccine Immunol.* 2008; 14(3):484-491

4. Complement regulators and inhibitory proteins. Zipfel and Skerka. *Nat. Rev. Immunol.* 2009; 9(10):729-740

5. Hide and seek: How Lyme disease spirochetes overcome complememt attack. Kraiczy P. *Front. Immunol.* 2016; 7:385

6. Blood-treatment of Lyme borreliae demonstrates the mechanism of CspZ-mediated complement evasion to promote systemic infection in vertebrate hosts. Marcinkiewicz et al. Cell. Microbiol. 2019; 21(2):e12998

7. New insights into CRASP-mediated complement evasion in the Lyme disease enzootic cycle. Lin et al. *Front. Cell. Infect. Microbiol.* 2020; 10:1

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.

For research use only!