

Monoclonal antibody against complement regulator-acquiring protein (CbiA) *Borrelia miyamotoi* [BM-C1-J12/6.7] Product No. ADG0174L

Description

Tick-borne relapsing fever (TBRF) spirochetes include *Borrelia (B.) hermsii*, *B. parkeri*, *B. duttonii*, and *B. miyamotoi*. As an emerging human pathogen *B. miyamotoi* is transmitted, in contrast to other TBRF spirochetes, by hard-bodied ticks. *B. miyamotoi* occurs sympatrically with *B. burgdorferi* s.l. in Asia, North America, and Europe. Human cases were first reported in patients with nonspecific febrile illness and symptoms similar to relapsing fever, including high-grade fever, headache, fatigue, chills, myalgia, arthralgia, and nausea led to the implementation of a new entity termed hard tick-borne relapsing fever (HTBRF). *B. miyamotoi* efficiently evade complement via CbiA, exhibiting complement inactivating properties.

Properties

The monoclonal antibody ADG0174L (BM-C1-J12/6.7) is a murine monoclonal antibody, subclass IgG₁ recognizing CbiA of *Borrelia miyamotoi* strain HT31. Mice were immunized with rec. CbiA. 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.

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.

B. Westernblot

The antibody is suitable for Western blot analysis, detecting native and recombinant CbiA 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. The relapsing fever spirochete *Borrelia miyamotoi* resists complement-mediated killing by human serum. Teegler et al. *Ticks Tick Borne Dis.* 2014; 5(6):898-901
2. Immune evasion of *Borrelia miyamotoi*: CbiA, a novel outer surface protein exhibiting complement binding and inactivating properties. Rötterding et al. *Sci. Rep.* 2017; 7(1):303
3. The complement binding and inhibitory protein CbiA of *Borrelia miyamotoi* degrades extracellular matrix components by interacting with plasmin(ogen). Nguyen et al. *Front. Cell. Infect. Microbiol.* 2018; 8:23
4. Immune evasion strategies of relapsing fever spirochetes. Rötterding and Kraiczy. *Front. Immunol.* 2020; 11:1560

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