

## Monoclonal antibody against complement regulator-acquiring protein (CbiA) *Borrelia miyamotoi* [BM-C1-R4/1.1] Product No. ADG0175L

### 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 ADG0175L (**BM-C1-R4/1.1**) is a murine monoclonal antibody, subclass IgG<sub>1</sub> 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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