

Monoclonal antibody against complement regulator-acquiring protein 1 (BhCRASP-1) *Borrelia hermsii* [Bh-2.5] Product No. ADG0171L

Description

Tick-borne relapsing fever in North America is primarily caused by the spirochete *Borrelia hermsii*. Spirochetes are transmitted to humans through the bite of infected soft ticks, in particular *Ornithodoros hermsii*. The pathogen employs multiple strategies, including the acquisition of complement regulators and antigenic variation, to escape innate and adaptive immune responses and to persist in the blood. The outer surface protein BhCRASP-1 binds the complement regulators factor H and FH-related protein 1. Furthermore, BhCRASP-1 binds plasminogen/plasmin and contributes to dissemination/invasion of *B. hermsii*.

Properties

The monoclonal antibody ADG0171L (Bh-2.5) is a murine monoclonal antibody, subclass IgG₁ recognizing BhCRASP-1 of *Borrelia hermsii* strain HS1. Mice were immunized with rec. BhCRASP-1. 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. Immunocytochemistry

The antibody can be used for immunocytochemistry on paraformaldehyde fixed spirochetes.

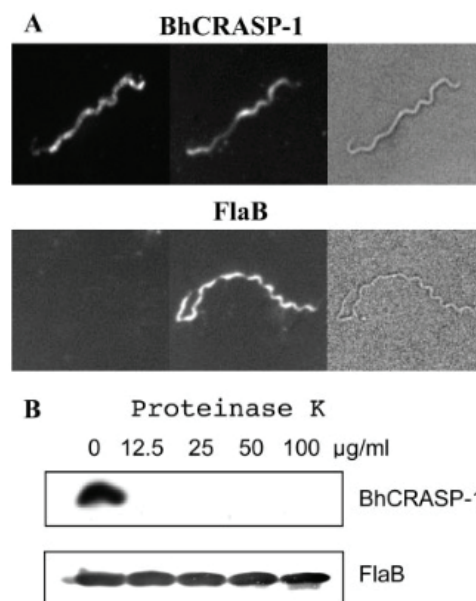
Hinweis/Note:

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.

C. Westernblot

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



Surface exposition of BhCRASP-1. **A**, *B. hermsii* after incubation with the BhCRASP-1-specific mAb (upper panel) and the flagellin-specific mAb LA21 (lower panel) followed by rabbit anti-mouse Cy3-conjugated IgG; for counterstaining, the DNA-binding 4,6-diamidino-2-phenylindole was used (middle), and a differential interference contrast image is also shown (left). **B**, Proteinase K treatment affects the surface expression of native BhCRASP-1. *B. hermsii* cells were incubated with the indicated concentration of proteinase K, lysed by sonication, immunoblotted, and screened with anti-BhCRASP-1 (Bh-2.5) and anti-FlaB (LA21) mAb.

References

1. Dual binding specificity of a *Borrelia hermsii*-associated complement regulator-acquiring surface protein for factor H and plasminogen discloses a putative virulence factor of relapsing fever spirochetes. Rossmann et al. *J. Immunol.* 2007; 178 (11):7292-7301
2. BhCRASP-1 of the relapsing fever spirochete *Borrelia hermsii* is a factor H- and plasminogen-binding protein. Rossmann et al. *Int. J. Med. Microbiol.* 2008; 298(S1):272-283

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