

Monoclonal antibody against complement regulator-acquiring protein 1 (BhCRASP-1) *Borrelia hermsii* [Bh-3.1] Product No. ADG0172L

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 ADG0172L (Bh-3.1) 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

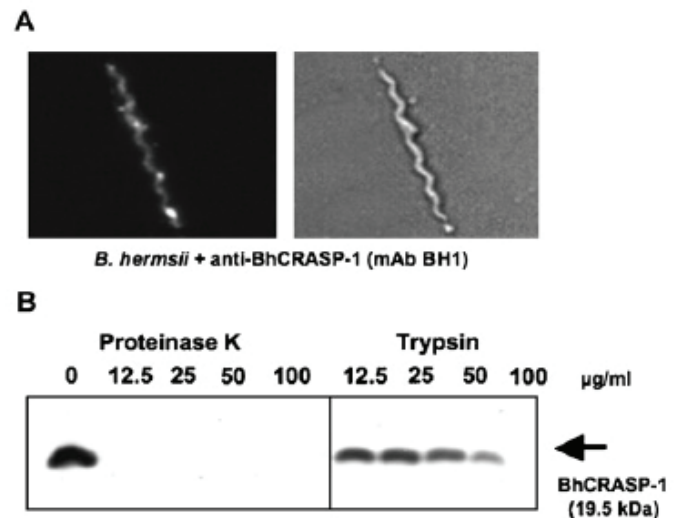
The antibody can be used as capture antibody in ELISAs. An antibody concentration of 1-10 µg/ml is recommended.

B. Immunocytochemistry

The antibody can be used for immunocytochemistry on paraformaldehyde fixed spirochetes

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 exposure of BhCRASP-1. (A) *Borrelia hermsii* after incubation with a BhCRASP-1-specific mAb Bh-3.1 followed by rabbit anti-mouse Cy3-conjugated IgG (left) and differential interference contrast image (right). (B) Proteinase K and trypsin treatment affects surface expression of native BhCRASP-1. *B. hermsii* cells were incubated with the indicated concentrations of proteinase K and trypsin, lysed by sonication, immunoblotted, and screened with anti-BhCRASP-1 mAb Bh-3.1

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

Hinweis/Note:

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