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ImmBioMed GmbH & Co. KG
Bergstrasse 85, DE-64319 Pfungstadt
Phone: +49 6157 9799 685, Fax: +49 6157 86443

Monoclonal antibody against outer suface protein BBA66 *Borrelia burgdorferi* [A66-EE]

Product No. ADG0120L

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. Several *Borrelia burgdorferi* proteins are upregulated by temperature- and/or mammalian host-specific signals as the spirochete is transmitted from ticks to mammals. BBA66 outer surface lipoprotein was found to be up-regulated during transmission and is immunogenic in mammals.

Properties

The monoclonal antibody ADG0120L (**clone A66-EE**) is a murine monoclonal antibody, subclass IgG_1 recognizing BBA66. Mice were immunized with rec. BBA66 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 BBA66 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. Identification of 11 pH-regulated genes in *Borrelia burgdorferi* localizing to linear plasmids. Carroll et al. *Infect. Immun*. 2000; 68(12):6677-6684

2. Identification and functional characterization of complement regulator-acquiring surface protein 1 of the Lyme disease spirochetes *Borrelia afzelii* and *Borrelia garinii*. Wallich et al. *Infect. Immun.* 2005; 73(4):2351-2359

3. Temporal expression analysis of the *Borrelia burgdorferi* paralogous gene family genes BBA64, BBA65, and BBA66 during persistent infection in mice. Gilmore et al. *Infect. Immun.* 2007; 75(6):2753-2764

4. Fast, adaptive evolution at a bacterial host-resistance locus: the PFam54 gene array in *Borrelia burgdorferi*. Wywial et al. *Gene*. 2009; 445(1-2):26-37

5. BBA70 of *Borrelia burgdorferi* is a novel plasminogen-binding protein. Koenigs et al. *J. Biol. Chem.* 2013: 288(35):25229-25243

6. Crystal structure of the infectious phenotype-associated outer surface protein BBA66 from the Lyme disease agent *Borrelia burgdorferi*. Brangulis et al. *Ticks Tick Borne Dis*. 2014; 5(1):63-68

7. Structural analysis of the outer surface proteins from *Borrelia burgdorferi* paralogous gene family 54 that are thought to be the key players in the pathogenesis of Lyme disease. Brangulis et al. *J. Struct. Biol.* 2020; 210(2):107490

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