

## Monoclonal antibody against complement regulator-acquiring protein **BGA71 *Borrelia garinii* [71-11/14.1]** Product No. ADG0151L

### Description

Lyme disease is the most common vector-borne disease in North America and Europe. The causative agents of the *Borrelia burgdorferi* sensu lato complex are maintained in an enzootic cycle between *Ixodes* ticks and a large range of mammals. Several *Borrelia* outer surface proteins are upregulated by temperature- and/or mammalian host-specific signals as the spirochete is transmitted from ticks to mammals. BGA71 outer surface lipoprotein (CRASP) was found to be able to bind complement regulator FHL-1 and is immunogenic in mammals.

### Properties

The monoclonal antibody ADG0151L (clone 71-11/14.1) is a murine monoclonal antibody, subclass IgG<sub>1</sub> recognizing BGA71. Mice were immunized with rec. BGA71 of *Borrelia garinii*. 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

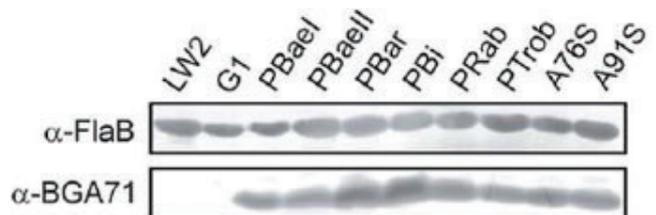
The antibody can be used as capture antibody in ELISAs. An antibody concentration of 1-10 µg/ml is recommended.

#### 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 BGA71 following SDS-PAGE under reducing conditions. A primary antibody concentration of 1-10 µg/mL is recommended.



Whole spirochetal cell lysates were separated by SDS-PAGE and transferred to NC. Membrans were probed with mAb 71-11/14.1 to identify BGA71

#### References

1. 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
2. Identification and functional characterization of complement regulator-acquiring surface protein-1 of serum resistant *Borrelia garinii* OspA serotype 4. Van Burgel et al. *BMC Microbiol.* 2010; 10:43
3. BGA66 and BGA71 facilitate complement resistance of *Borrelia bavariensis* by inhibiting assembly of the outer membrane attack complex. Hammerschmidt et al. *Mol. Microbiol.* 2016; 99(2): 407-424
4. Hide and seek: How Lyme disease spirochetes overcome complement attack. Kraiczy. *Front. Immunol.* 2016; 7:385
5. Host immune evasion by Lyme and relapsing fever *Borreliae*: Findings to lead future studies for *Borrelia miyamotoi*. Stone and Brissette. *Front. Immunol.* 2017; 8:12
6. Crystal structure of the membrane attack complex assembly inhibitor BGA71 from the Lyme disease agent *Borrelia bavariensis*. Brangulis et al. *Sci. Rep.* 2018; 8(1):11286

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