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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 heat shock protein HSP60 *Borrelia burgdorferi* [LA-18]

Product No. ADG0110L

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. In Lyme disease, Hsp60 is an immunodominant antigen, and the immunological recognition of Hsp60 may be involved in the development of Lyme arthritis. Hsp60 is homologue to GroEL of *E. coli*. Hsp60 bind to nascent or misfolded proteins and help maintain their secondary structure during stress conditions.

Properties

The monoclonal antibody ADG0110L (**clone LA-18**) is a murine monoclonal antibody, subclass IgG_1 recognizing HSP60. Mice were immunized with cell lysates of *Borrelia burgdorferi*. 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. Westernblot

The antibody is suitable for Western blot analysis, detecting native and recombinant HSP70 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. Characterization of Borrelia burgdorferi associated antigens by monoclonal antibodies. Kramer et al. *Immunobiol.* 1990; 181:357-366
2. Evaluation of genetic divergence among *Borrelia burgdorferi* isolates by use of OspA, fla, HSP60, and HSP70 gene probes. Wallich et al. *Infect. Immun.* 1992; 60(11):4856-4866
3. Immunological and structural characterization of the dominant 66- to 73-kDa antigens of *Borrelia burgdorferi*. Luft et al. *J. Immunnol.* 1991; 146:2776-2782
4. Characterization of the heat shock response and identification of heat shock protein antigens of *Borrelia burgdorferi*. Carreiro et al. *Infect. Immun.* 1990; 58:2186-2191
5. Subcellular localization and chaperone activities of *Borrelia burgdorferi* Hsp60 and Hsp70. Scopio et al. *J. Bacteriol.* 1994; 176(21):6449-6456
6. T cell and antibody reactivity with the *Borrelia burgdorferi* 60-kDa heat shock protein in Lyme arthritis. Shanafelt et al. *J. Immunol.* 1991; 146(11):39

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