

Monoclonal antibody against tick saliva protein of 15kDa (Salp15/Iric-1) *Ixodes scapularis/Ixodes ricinus* [19/7.4] Product No. ADG0196L

Description

Ticks are vectors for various, including pathogenic, microbes. Tick saliva contains multiple anti-host defense factors that enable ticks their blood meals yet also facilitate microbe transmission. Lyme disease-causing borreliae profit specifically from the broadly conserved tick histamine release factor (tHRF), and from cysteine-rich glycoproteins represented by Salp15 from *Ixodes scapularis* and Iric-1 from *Ixodes ricinus* ticks which they recruit to their outer surface protein C (OspC) as a protective coat against antibody-mediated killing. Salp15 is a secreted, immunosuppressive protein that binds to CD4 on murine T cells and to DC-SIGN on dendritic cells, compromising IL2 production and thus T cell proliferation.

Properties

The monoclonal antibody ADG0196L (19/7.4) is a murine monoclonal antibody, subclass IgG_{2a} recognizing saliva protein Salp15 of *Ixodes scapularis*. Mice were immunized with rec. Salp15. 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

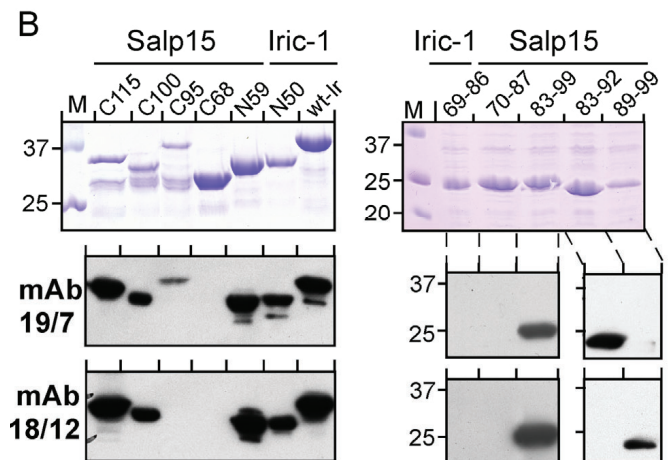
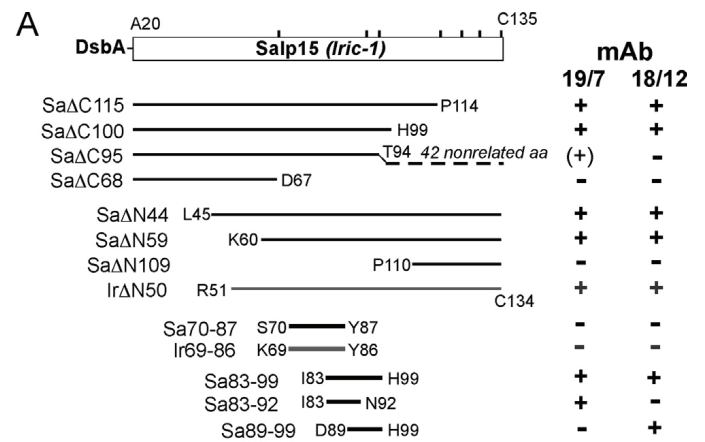
The antibody can be used as capture antibody in ELISAs. An antibody concentration of 1-10 µg/ml is recommended.

B. Westernblot

The antibody is suitable for Western blot analysis, detecting native and recombinant Salp15 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.



Mapping the epitopes of mAbs 19/7.4 and 18/12.1. (A) Schematic overview of the constructs used. Perpendicular marks on the box representing the Salp15 (Iric-1) ORF indicate the positions of the seven Cys-residues. Salp15 (Sa) derivatives are indicated as black lines, Iric-1 (Ir) derivatives as grey lines. Reactivities with the two mAbs derived from immunoblotting results are summarized on the right. (B) SDS-PAGE analysis and immunoblots. The indicated DsbA fusion proteins were analyzed. Note that the Salp15 sequence 83-99, the smallest internal segment recognized by both mAbs, is identical to the Iric-1 sequence 82-98. (C) Salp15 primary sequences encompassing the epitopes of mAbs 19/7.4 and 18/12.1.

References

1. Salp15, an *Ixodes scapularis* salivary protein, inhibits CD4(+) T cell activation. Anguita et al. *Immunity* 2002; 16(6):849-859
2. The Lyme disease agent exploits a tick protein to infect the mammalian host. Ramamoorthi et al. *Nature* 2005; 436(7050):573-577
3. The *Ixodes scapularis* salivary protein, Salp15, prevents the association of HIV-1 gp120 and CD4. Juncadella et al. *Biochem Biophys Res Commun.* 2007; 367(1):41-46
4. Tick-host-pathogen interactions in Lyme borreliosis. Hovius et al. *Trends Parasitol.* 2007; 23(9):434-438
5. Antibodies against a tick protein, Salp15, protect mice from the Lyme disease agent. Dai et al. *Cell Host Microbe.* 2009; 6(5):482-492
6. Genetic diversity of Salp15 in the *Ixodes ricinus* complex (Acari: Ixodidae). Wang et al. *PLoS One* 2014; 9(4):e94131
7. Whole-Chain Tick Saliva Proteins Presented on Hepatitis B Virus Capsid-Like Particles Induce High-Titered Antibodies with Neutralizing Potential. Kolb et al. *PLoS One.* 2015; 10(9):e0136180
8. Soluble cysteine-rich tick saliva proteins Salp15 and Iric-1 from *E.coli*. Kolb et al. *FEMS Open Bio.* 2015; 5:42-55
9. Salp15, a multifunctional protein from tick saliva with potential pharmaceutical effects. Wen et al. *Front Immunol.* 2020; 10:3067

Hinweis/Note:

Der Packungsbeileger dient nur als erste Information. Der relevante Packungsbeileger liegt der Ware bei.

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