

## Monoclonal antibody against tick saliva protein Cystatin\_1 (SialoL) *Ixodes ricinus* [Cyst1-1] Product No. ADG0190L

### Description

Access to a nutritious blood meal has been gained independently numerous times and in various families and orders during invertebrate evolution. Hard ticks feed on their hosts for several days and have evolved a series of strategies to circumvent host defenses during their prolonged meal. Among them, the shedding of saliva in the sites of bite(s) possesses a critical role. Tick saliva contains a broad repertoire of potent pharmacologic molecules with vasoactive, anti-hemostatic, antiinflammatory, and immunomodulatory action. Tick cystatins either regulate hemoglobin digestion, which is driven by cathepsins, or they can be secreted as immunomodulators into the host with saliva. One of the best studied tick cystatins is sialostatin L, a type 2 cystatin detected in *I. scapularis*.

### Properties

The monoclonal antibody ADG0190L (**Cyst1-1**) is a murine monoclonal antibody, subclass IgG<sub>1</sub> recognizing saliva protein Cystatin\_1/SialoL of *Ixodes ricinus* /*I. scapularis*. Mice were immunized with rec. Cystatin\_1. 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.

#### Hinweis/Note:

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

The datasheet is for information purposes only. The current datasheet will be enclosed with product shipment.

#### B. Westernblot

The antibody is suitable for Western blot analysis, detecting native and recombinant Cystatin\_1/SialoL 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.

### References

1. Antiinflammatory and immunosuppressive activity of Sialostatin L, a salivary Cystatin from the tick *Ixodes scapularis*. Kotsyfakis et al. *J Biol Chem*. 2006; 281(36):26298-26307
2. Selective cysteine protease inhibition contributes to blood-feeding success of the tick *Ixodes scapularis*. Kotsyfakis et al. *J Biol Chem*. 2007; 282(40):29256-29263
3. The role of cystatins in tick physiology and blood feeding. Schwarz et al. *Ticks Tick Borne Dis*. 2012; 3(3):117-127
4. Protease inhibitors in tick saliva: the role of serpins and cystatins in tick-host-pathogen interaction. Chmelar et al. *Front Cell Infect Microbiol*. 2017; 7:216
5. Small protease inhibitors in tick saliva and salivary glands and their role in tick-host-pathogen interactions. Martins et al. *Biochem Biophys Acta Proteins Proteom*. 2020; 1868(2):140336

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