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Product datasheet for TA396887S

vlsE Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	**WB**: 1:1000 **ELISA**: 1:250
Reactivity:	Borrelia burgdorferi
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	MBP recombinant protein corresponding to Borrelia burgdorferi VlsE protein.
Specificity:	This product was Protein-A purified and cross-adsorbed against MBP from monospecific antiserum by chromatography. This antibody is specific for Borrelia burgdorferi VlsE protein. A BLAST analysis was used to suggest reactivity with VlsE from B. burgdorferi sources based on 100% homology with the immunizing sequence. Cross-reactivity with VlsE from other sources has not been determined.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	1.0 mg/mL - lot specific
Conjugation:	Unconjugated
Storage:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Stability:	Expiration date is three (3) months from date of receipt.
Database Link:	G5IXI6

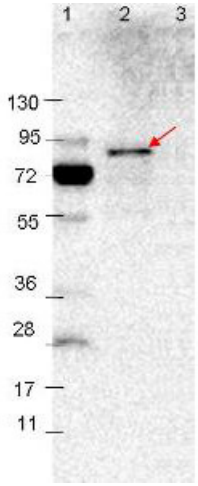
View online »

Background: Variable Lipoprotein Surface-Exposed protein, or VlsE, is a lipoprotein on the surface of the Lyme Disease spirochete Borrelia burgdorferi, detectable during all its life stages. It can exist as many different isoforms. VlsE has variable regions (VRs) and invariable regions (IRs). Some IRs are anchored in the outer membrane of the bacteria and some are antigens exposed on the membrane surface. Replacement of the VR by Borrelia within days of being transferred to a mammalian host presents new surface antigens to the host immune system, and helps Borrelia avoid a strong reaction by host immune systems. The VlsE is apparently not modified as much in the tick or in the rodent vector, when compared to in the mammal host. Several putative envelope proteins of B. burgdorferi appear to be expressed only in the infected mammalian host. The VRs are antigenic, irregularly shaped loops on the bacterial surface which may help to hide both membrane-incorporated and surface portions of adjacent proteins from immune cells. These VR loops are coded by antigenic cassettes. The protein loops can therefore be switched in or out of the protein, or different type loops traded. In B. burgdorferi there seem to be at least fifteen different VlsE cassettes that can insert into any of the variable regions of VlsE, allowing it to appear as millions of different antigens. Similar, but smaller, systems also operate for OSP-A, OSP-B, OSP-C, and other proteins. Some current research involves determination of control of cassette activation. One IR region, C6, of the VlsE protein, consistently stimulates a strong immune response. Its presentation may be a decoy that misdirects the immune system from less protected sites by causing competition for binding antibodies. The bound antibodies are thus not available for binding important therapeutic proteins. This may help Borrelia to enter T-cells, leading to their destruction. Because IR6 is invariable and found in all life stages of B. burgdorferi, it has been used in an ELISA diagnostic test for early IgM of Lyme Disease.

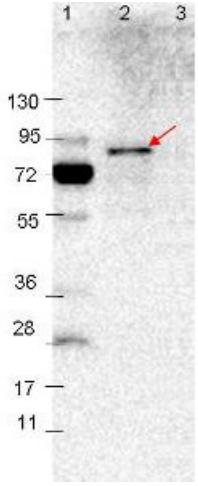
Synonyms: rabbit anti-VlsE Antibody, Outer surface protein VlsE, Borrelia burgdorferi VlsE, vlsE protein

Note: Anti-VlsE antibody has been tested in ELISA and Western Blot. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~36.3 kDa in size corresponding to VlsE by Western blotting in the appropriate cell lysate or extract.

Product images:



Western blot showing detection of 0.1 µg of recombinant VlsE protein. Lane 1: Molecular weight markers. Lane 2: MBP-VlsE fusion protein (arrow; expected MW: 78.8 kDa). Lane 3: MBP alone. Protein was run on a 4-20% gel, then transferred to 0.45 µm nitrocellulose. After blocking with 1% BSA-TTBS (p/n MB-013, diluted to 1X) overnight at 4°C, primary antibody was used at 1:1000 at room temperature for 30 min. HRP-conjugated Goat-Anti-Rabbit (p/n 611-103-122) secondary antibody was used at 1:40,000 in MB-070 blocking buffer and imaged on the VersaDoc™ MP 4000 imaging system (Bio-Rad).



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