

Datasheet for 200-401-C13**OspA Antibody****Overview**

Description:	Anti-OspA (RABBIT) Antibody - 200-401-C13
Item No.:	200-401-C13
Size:	100 µg
Applications:	ELISA, WB, IF
Reactivity:	Borrelia burgdorferi
Host Species:	Rabbit

Product Details

Background:	Outer-Surface Protein A (OspA), a lipoprotein from <i>Borrelia burgdorferi</i> encoded on its Plasmid lp54, is a major component of the spirochete's extracellular matrix. OspA probably serves as a lipid-anchor. The spirochetes migrate from the tick midgut during feeding to its salivary glands and are thus transmitted to the mammal host. This transition may be facilitated by changes in expression of some <i>B. burgdorferi</i> genes. Upon transmission of the spirochete from the Ixodes tick to mammalian host, the transcript level of OspA can change. It is believed that expression of the various proteins associated with the spirochete may be regulated by the changes in tick life cycle, changes in conditions during tick feeding (such as temperature, pH, and nutrients) and/or in coordination with the course of infection of the mammal host. <i>B. burgdorferi</i> can attach to (and also differentially express antigens in) diverse tissues within the vertebrate host and the tick vector, suggesting that physiological factors other than pH and temperature may play roles in modulating <i>B. burgdorferi</i> gene expression.
Synonyms:	rabbit anti-OspA Antibody, Outer surface protein A, <i>Borrelia burgdorferi</i> OspA, ospA, BB_A15, Plasmid lp54
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	ospA
Reactivity:	<i>Borrelia burgdorferi</i>

Immunogen Type:	Recombinant Protein
Immunogen:	MBP-fusion protein corresponding to <i>Borrelia burgdorferi</i> OspA protein.
Purity/Specificity:	This product was Protein-A purified and cross-adsorbed against MBP from monospecific antiserum by chromatography. This antibody is specific for <i>Borrelia burgdorferi</i> OspA protein. A BLAST analysis was used to suggest cross-reactivity with OspA from <i>B. burgdorferi</i> and sources based on 100% homology with the immunizing sequence. Cross-reactivity with OspA or Osp from other sources has not been determined.
Relevant Links:	• UniProtKB - P0CL66 • NCBI - NP_045688.1 • GeneID - 1194357

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IF (Based on references)
Application Note:	This protein-A purified antibody has been tested for use in ELISA and Western blotting. Specific conditions for reactivity should be optimized by the user. Expect a band approximately 28.1 kDa in size corresponding to <i>Borrelia burgdorferi</i> OspA protein by Western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	>1:5,000
WB:	1:1,000

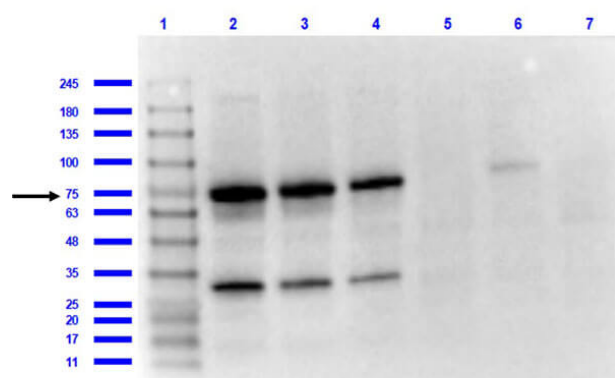
Formulation

Physical State:	Lyophilized
Concentration:	1.12 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

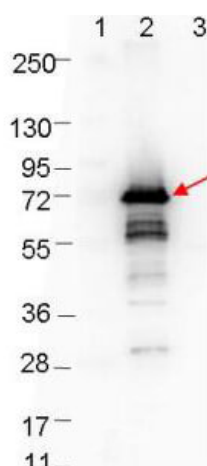
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western Blot of Anti-OspA Antibody. Lane 1: Opal Pre-stained Molecular Weight Marker (p/n MB-210-0500). Lane 2: 10µg HeLa spiked 50ng OspA. Lane 3: 10µg HeLa spiked 20ng OspA. Lane 4: 10µg HeLa spiked 10ng OspA. Lane 5: 10µg HeLa Whole Cell Lysate (p/n W09-000-364). Lane 6: 10µg HeLa spiked 50ng OspB. Lane 7: 10µg HeLa spiked 50ng OspC. Primary Antibody: Anti-OspA at 1:1000 overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP (p/n 611-103-122) at 1:70,000 for 30 min at RT. Block: BlockOut Buffer (p/n MB-073). Predicted MW: ~28.1kDa OspA protein, 70.5kDa MBP-OspA fusion. Observed MW: ~30kDa, ~75kDa.



Western Blot

Western blot showing detection of 0.1 µg of recombinant OspA protein. Lane 1: Molecular weight markers. Lane 2: MBP-OspA fusion protein (arrow; expected MW: 70.5 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).

References

- Jathan J et al. Evaluating Outer Membrane Vesicle Isolation Techniques for *Borrelia burgdorferi* and Their Impact on Vesicle Composition, Gene Expression Profile and Uptake. *Antibiotics (Basel)*. (2025)
- Salverda, Merijn Louis Marten (Amsterdam, NL), Van Der, Ley Peter André (Utrecht, NL) Surface display of antigens on Gram-negative outer membrane vesicles. *patent:20200197308* (2020)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.