RECOMBINANT ANTIGEN ospC from *Borrelia afzelii*

CATALOG NUMBER: RAG0042 **LOT NUMBER:** 12RAG0042002

RECOMBINANT ANTIGEN: the outer surface protein C (OspC) of Borrelia afzelii (Rousselle *et al.*, 1998).

DESCRIPTION: the *Borrelia afzelii* antigen OspC has been prepared as a recombinant antigen fused to a his-tag in its N-terminus. It is produced from the complete ORF of the gene of the outer surface protein C.

BLAST ANALYSIS: YP_709265.1

PRESENTATION: liquid protein solution

SOURCE: *Escherichia coli*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein band is between molecular markers of 25,000 and 35,000 Da, while relative molecular mass calculated from amino acid sequence is 31,320.3 Da.

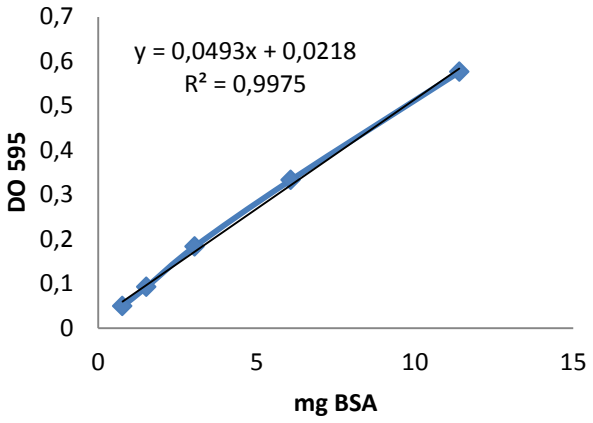
DATE OF BATCH RELEASE: 13/07/12

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
his-ospC	recombinant antigen with a his-tag in its N-terminus
Storage buffer	20 mM phosphate buffer pH 8, 1 M NaCl and 0.1% polyoxyethylene (10) tridecyl ether, urea 8 M

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY



This protein does not contain any Trp residues. Experience shows that this could result in more than 10% error in the computed extinction coefficient. Therefore, we have meassured the protein concentration by using the colorimetric assay based on the interaction between Coomassie brilliant blue and the arginine and aromatic residues (Bradford Method) and its maximum absorption shifts from 470 nm to 595 nm. The standard curve was performed with the protein BSA. 5 µl of the protein were analysed.

DO_{595} = 0.252
CONCENTRATION: 0.908 mg/ml

2. PURITY CONTROL IN SDS-PAGE: 15%

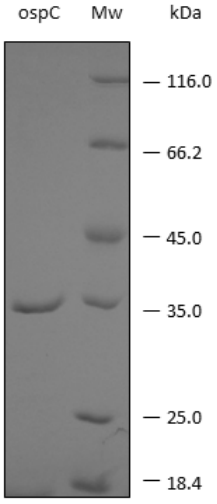


Figure 1. SDS-PAGE analysis (15%) of 3 µl of recombinant ospC. Purity is > 95% as determined by gel electrophoresis.

3. ABSENCE OF PRECIPITATION AFTER A FREEZING AND THAWING CYCLE: ok

LOT SPECIFICATIONS:

1. CONCENTRATION: 0.908 mg/ml

2. TOTAL QUANTITY PER ALIQUOT: 1 mg

3. TOTAL VOLUME PER ALIQUOT (5% overfill): 1.155 ml

4. STORAGE: Protein is shipped with dry ice. Upon arrival, it should be aliquoted in order to avoid repeated freezing and thawing cycles and stored at -20ºC to -80ºC.

6. APPLICATIONS: not tested. Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates.

7. OBSERVATIONS: : in some cases, purified proteins run at a molecular weight which is slightly different to the theoretically calculated molecular weight maybe due to the his-tag presence, which can produce a delay in SDS-PAGE. Proteins should be maintained frozen at high concentrations. The dilution to be performed for ELISA assays should be made with a small quantity of protein, the same day of the experiment. In order to defrost the protein, maintain the aliquot at 25ºC without shaking to avoid aggregation. Prior making test dilutions and after defrost the protein, is recommended to remove possible protein aggregates by centrifuging the stock solution, avoiding alterations in the immobilization of the biomolecule to the solid surface.

RELATED PRODUCTS:

P14 Bb, p14 Ba, p14 Bg, Vlse Bb.

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BIBLIOGRAPHY:

Rousselle J. C., Callister S. M., Schell R. F., Lovrich S. D., Jobe D. A., Marks J. A. and Wieneke C. A. Borreliacidal antibody production against outer surface protein C of Borrelia burgdorferi. 1998, *J. Infect. Dis.*, 178(3):733-41.

Bradford, MM. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein dye binding. Anal Biochem. 1976, 131:499-503.

Important Notes: During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µl or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the containers cap.

Although recombinant antigens are expressed in non-pathogenic *E. coli* and bacterial integrity is destroyed during purification, the antigen preparation should be handled as potencially infectious.

NOT FOR DIAGNOSTIC USE, FOR RESEARCH USE ONLY

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