

Recombinant antigen ospC for *Borrelia afzelii*

CATALOG NUMBER: RAG0042

LOT NUMBER: #

RECOMBINANT ANTIGEN: the outer surface protein C (ospC) of *Borrelia afzelii* (Lagal *et al.*, 2003).

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

PRESENTATION: liquid protein solution

SOURCE: *Escherichia coli*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein band is between molecular markers of 35,000 and 45,000 Da, while relative molecular mass calculated from amino acid sequence is 39,224.30 Da.

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
Trx-his-ospC	recombinant antigen with a TrxA-tag and a his-tag in its N-terminus
Storage buffer	20 mM phosphate buffer pH 8, 0.15 M NaCl and 0,1% polyoxyethylene (10) tridecylether

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

$DO_{280} = 1.62$
 $A_{0.1\%} (=1 \text{ g/l}) = 0.436$
 CONCENTRATION*: 3.71mg/ml

* The measurement of the protein concentration has been performed with the theoretical extinction coefficient of the recombinant protein obtained from Gill and vonHippel, 1989. It is recommended that the users carry out their absorbance determinations to avoid equipment variabilities regarding final concentration, mainly in reproducibility analysis.

2. PURITY CONTROL IN SDS-PAGE: 15%

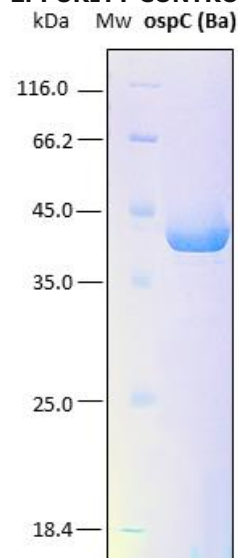


Figure 1. SDS-PAGE analysis (15%) of 1 μ l of recombinant ospC. Purity is > 95% as determined by gel electrophoresis.

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

LOT SPECIFICATIONS:

- 1. CONCENTRATION:** 3.71 mg/ml
- 2. TOTAL QUANTITY PER ALIQUOT:** 1 mg
- 3. TOTAL VOLUME PER ALIQUOT:** 0.283 ml
- 4. STORAGE:** Protein is shipped with dry ice. Upon arrival, it should be aliquoted to avoid repeated freezing and thawing cycles and stored at -20°C to -80°C. In order to defrost the protein, maintain the aliquot at 25°C without shaking to avoid aggregation.
- 5. TESTED APPLICATIONS:** none.

6. POSSIBLE APPLICATIONS: WB, DB, Indirect ELISA, positive control in direct ELISA, CLIA, lateral-flow. 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: 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 25°C 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:

Flagellin B Ba, Flagellin B Bg, Flagellin B Bb, ospC Bb, ospC Bg, VlsE Bg, VlsE Ba, ChimLyme Bb.

BIBLIOGRAPHY:

Lagal, V., le Postic, D., Ruzic-Sabljić, E., and G. Baranton. Genetic Diversity among *Borrelia* Strains Determined by Single-Strand Conformation Polymorphism Analysis of the ospC Gene and Its Association with Invasiveness. 2003. *Journal of Clinical Microbiology*, 41:5059–5065

Gill SC, von Hippel PH. Calculation of protein extinction coefficients from amino acid sequence data. *Anal Biochem.* 1989 Nov 1;182(2):319-26.

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 potentially infectious.

FOR RESEARCH AND COMMERCIAL USE *IN VITRO*: not for human *in vivo* or therapeutic use.

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