# Recombinant antigen LipL21 for *Leptospira interrogans*

**CATALOG NUMBER:** RAG0100 **LOT NUMBER:** #

**RECOMBINANT ANTIGEN:** *Leptospira interrogans* lipL21 (Seenichamy *et al.*, 2014)

**DESCRIPTION:** the mature *Leptospira interrogans* antigen LipL21 has been prepared as a recombinant antigen fused to a his-tag. It is produced from the lipL21 gene which codifies an outer membrane lipoprotein of the spirochete *Leptospira interrogans*

**PRESENTATION:** liquid protein solution

**SOURCE:** *Pichia pastoris*

**MOLECULAR WEIGHT:** SDS-PAGE analysis determines that the protein band is between the molecular markers of 35,000 and 25,000 Da due to the glycosylation pattern, while relative molecular mass, calculated from amino acid sequence and without glycosylation, is 21,346.50 Da.

**BATCH COMPOSITION:**

| COMPONENTS | COMPOSITION |
|---|---|
| his-lipL21 | recombinant antigen with a his-tag in its C-terminus |
| Storage buffer | 20 mM phosphate buffer pH 8 and 0.1 M KCl |

**QUALITY CONTROL:**

**1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY**

$DO_{280}$ = 2.37
$A_{0.1\,\%}$ (=1 g/l) = 1.391
CONCENTRATION*: 1.70 mg/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%**

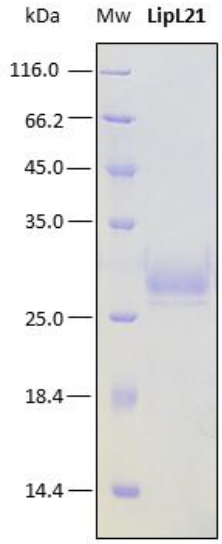


**Figure 1.** SDS-PAGE analysis (15%) of 1 µl of recombinant lipL21. Purity is >95% as determined by gel electrophoresis.

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

**LOT SPECIFICATIONS:**

**1. CONCENTRATION:** 1.70 mg/ml

**2. TOTAL QUANTITY PER ALIQUOT:** 1 mg

**3. TOTAL VOLUME PER ALIQUOT**: 0.617 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 -20ºC to -80ºC. In order to defrost the protein, maintain the aliquot at 25ºC without shaking to avoid aggregation.

**5. TESTED APPLICATIONS:** none.

**6. POSIBLE 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. **Due to the nonspecific interaction with anti-CCDs present in normal human or animal sera, we strongly recommend using 12.5 µg of our sorbent SOR0001 on the analyzed sera in any immunoassay.** 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 25ºC without shaking to avoid aggregation. Prior making test dilutions and after defrosting 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:**

LipL32.

**BIBLIOGRAPHY:**

**Seenichamy A. *et al.*** Production and Characterization of a polyclonal antibody of anti-rLipL21-IgG against Leptospira for early detection of acute leptospirosis. BioMed Research International, Volume 2014, Article ID 592858, 8 pages.

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



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**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 *P. pastoris* 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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