

Recombinant allergen Sal k 1 for *Salsola kali* (Russian thistle)

CATALOG NUMBER: RAL0018

LOT NUMBER: #

RECOMBINANT ALLERGEN: Sal k 1 is the major allergen of *Salsola kali* pollen (Mohammad *et al.*, 2010).

DESCRIPTION: the *Salsola kali* pectin methylesterase Sal k 1 isoallergen 1.0302 has been prepared as the recombinant mature protein fused to a his-tag.

PRESENTATION: liquid protein solution

SOURCE: *Escherichia coli*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein band is at the molecular marker of 45,000 Da, while relative molecular mass calculated from amino acid sequence is 43,162.6 Da.

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
his-Sal k 1	recombinant allergen with a his-tag
Storage buffer	20 mM phosphate buffer pH 7, 0.15 M NaCl and 0.1% polyoxyethylene (10) tridecyl ether

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

DO₂₈₀ = 1.138
A_{0.1%} (=1 g/l) = 0.964
CONCENTRATION*: 1.18 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%

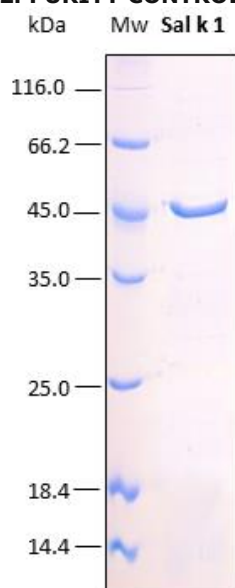


Figure 1. SDS-PAGE analysis (15%) of 1 µl of recombinant allergen. Purity is >95% as determined by gel electrophoresis.

3. ANALYSIS BY AN ELISA ASSAY

This biomarker has been evaluated in an external study carried out at a Spanish hospital by a group of allergists with positive and negative serum samples from patients. The evaluation of the recombinant allergens has been performed by means of an in-house ELISA assay. In this immunoassay, it has been determined the presence of specific IgE in sera that had previously been validated by skin prick testing (SPT) and the UniCAP® test. The sera panel for this study was composed of 11 positive and 10 negative specimen sera.

The recombinant allergen Sal k 1 detected 7 positive sera out of 11 (63.63% incidence), being the incidence described in the bibliography of 67%.

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

LOT SPECIFICATIONS:

- 1. **CONCENTRATION:** 1.18 mg/ml
- 2. **TOTAL QUANTITY PER ALIQUOT:** 1 mg
- 3. **TOTAL VOLUME PER ALIQUOT:** 0.889 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: ELISA.

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. 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:

None.

BIBLIOGRAPHY:

Mohammad Ali Assarehzadegan, Mojtaba Sankian, Farahzad Jabbari, Mohsen Tehrani and AbdoReza Varasteh. Expression of the Recombinant Major Allergen of *Salsola kali* Pollen (Sal k 1) and Comparison with Its Low-

Immunoglobulin E-Binding Mutant. 2010, *Allergology International*;59:213-222

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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Rekom Biotech S.L. – BIC-Granada, Avda. Innovación, 1 – 18016, Granada (Spain) Tel: +34 958 63 70 85
E-mail: info@rekombiotech.com – Web: www.rekombiotech.com – An ISO 9001 and 13485 Certified Company

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