Recombinant allergen Fel d 1 for *Felis domesticus* (cat)

CATALOG NUMBER: RAL0023 **LOT NUMBER:** #

RECOMBINANT ALLERGEN: Fel d 1 is the major allergen of *Felis domesticus* (cat) (Ohman *et al*., 1976).

DESCRIPTION: the *Felis domesticus* uteroglobin Fel d 1 has been prepared as the recombinant mature protein composed of two chains and fused to a his-tag.

PRESENTATION: liquid protein solution

SOURCE: *Pichia pastoris*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein shows three different bands which are between molecular markers of 25,000 and 18,400 Da, between 18,400 and 14,400 Da and below 14,400 Da while relative molecular mass calculated from amino acid sequence is 22,472.37 Da for the dimer and two bands of 13,000 and 10,000 Da for the monomeric chains.

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
his-Fel d 1	recombinant allergen with a his-tag
Storage buffer	20 mM HEPES buffer pH 8, 0.15 M NaCl and 5 mM EDTA

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

DO_{280} = 1.5
$A_{0.1\,\%}$ (=1 g/l) = 0.593
CONCENTRATION*: 2.5 mg/ml

* The meassurement of the protein concentration has been performed with the theoretical extinction coefficient of the recombinant protein obtained from Gill and vonHippel, 1989

2. PURITY CONTROL IN SDS-PAGE: 15%

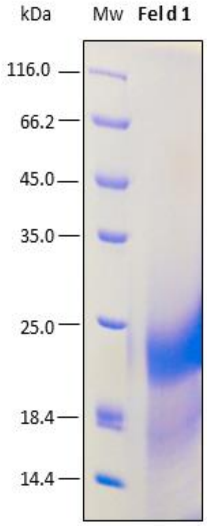

Figure 1. SDS-PAGE analysis (15%) of 5 µl of recombinant allergen. Purity is >95% as determined by gel electrophoresis.

3. ANALYSIS BY AN ELISA ASSAY

The evaluation of the recombinant allergen 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 25 positive and 10 negative specimen sera.

The recombinant allergen Fel d 1 detected 22 positive sera out of 25 (82% incidence) with higher prevalence of sera with titers of 0.70-3.5 IU/ml (international units per milliliter; 1 IU is equivalent to 2.42 ng of IgE).

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

LOT SPECIFICATIONS:

1. CONCENTRATION: 2.5 mg/ml

2. TOTAL QUANTITY PER ALIQUOT: 1 mg

3. TOTAL VOLUME PER ALIQUOT: 0.400 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.

5. OBSERVATIONS: proteins should be maintained frozen at high concentrations. 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:

None.

BIBLIOGRAPHY:

Ohman, J. L., Lowell, F. C., Bloch, K. J. and Kendall, S. Allergens of mammalian origin V. properties of extracts derived from domestic cat. 1976, *Clin. Allergy* 6:419-28.

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. pastori* and bacterial integrity is destroyed during purification, the antigen preparation should be handled as potentially infectious.

NOT FOR DIAGNOSTIC USE, FOR RESEARCH USE ONLY

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