CATALOG NUMBER: RAL0013

RECOMBINANT ALLERGEN: Dermatophagoides farinae
Der f 2 (Heyman et al., 1989).

DESCRIPTION: Der f 2 is one of the major allergens of the American house dust mite. This allergen is of the NPC2 family and it has been produced as a recombinant mature protein fused to a his-tag in its C-terminus.

PRESENTATION: liquid protein solution

SOURCE: Pichia pastoris

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein appears at the molecular marker of 18,400 Da, while relative molecular mass calculated from amino acid sequence is 16,555.8 Da.

BATCH COMPOSITION:

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>COMPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>his-Der f 2</td>
<td>recombinant allergen with a his-tag</td>
</tr>
<tr>
<td>Storage buffer</td>
<td>50 mM MES pH 6 and 0.1 M KCl</td>
</tr>
</tbody>
</table>

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

\[ \text{DO}_{280} = 0.680 \]

\[ A \times \% \text{ (g/l)} = 0.625 \]

CONCENTRATION*: 1.088 mg/ml

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

2. PURITY CONTROL IN SDS-PAGE: 15%

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 Der f 2 detected 18 positive sera out of 25 (72% incidence) with higher prevalence of sera with titer 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: 1.088 mg/ml
2. TOTAL QUANTITY PER ALIQUOT: 1 mg
3. TOTAL VOLUME PER ALIQUOT: 0.965 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 -20°C to -80°C.

5. 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:

Der p 10, Lep d 2, Der p 1.

BIBLIOGRAPHY:


**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 container's 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.

**NOT FOR DIAGNOSTIC USE, FOR RESEARCH USE ONLY**