

Recombinant allergen Ole e 5 for *Olea europaea* (olive tree)

CATALOG NUMBER: RAL0047

LOT NUMBER: #

RECOMBINANT ALLERGEN: *Olea europaea ole e 5* olive tree allergen, superoxide dismutase [Cu-Zn] 2 (Butteroni *et al.*, 2005).

DESCRIPTION: Ole e 5 is a minor allergen of olive tree pollen (35-40% incidence). This allergen has been prepared as a recombinant protein fused to a his-tag in its N-terminus. It corresponds to the complete ORF of the SOD protein.

PRESENTATION: liquid protein solution

SOURCE: *Escherichia coli*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein band is between the molecular markers of 18,400 and 25,000 Da, while relative molecular mass calculated from amino acid sequence is 21,742.9 Da.

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
his-ole e 5	recombinant allergen with a his-tag
Storage buffer	20 mM phosphate buffer pH 8 and 0.15 M NaCl

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

DO₂₈₀ = 0.251
A_{0.1%} (=1 g/l) = 0.143
CONCENTRATION*: 1.75 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%

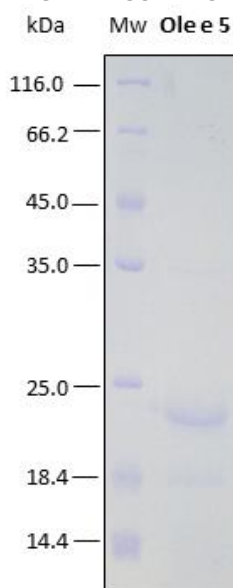
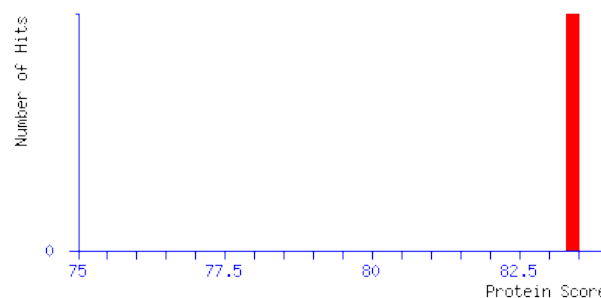


Figure 1. SDS-PAGE analysis (15%) of 3 µl of the recombinant allergen Ole e 5. Purity is approx. 95% as determined by gel electrophoresis.

3. PROTEIN FINGERPRINT BY MASS SPECTROMETRY

Top Score: 83 for ole e 5

Protein score is $-10 \cdot \log(P)$, where P is the probability that the observed match is a random event. Protein scores greater than 13 are significant ($p < 0.05$).



SODwt Mass: 21844 **Score:** 83 **Expect:** 9.1e-009 **Matches:** 9

The MS was performed with a by MALDI TOF/TOF model UltrafleXtreme (Bruker).

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

LOT SPECIFICATIONS:

- 1. CONCENTRATION:** 1.75 mg/ml
- 2. TOTAL QUANTITY PER ALIQUOT:** 1 mg
- 3. TOTAL VOLUME PER ALIQUOT:** 0.571 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. In order to defrost the protein, maintain the aliquot at 25°C 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:

Ole e 1, Ole e 2.

BIBLIOGRAPHY:

Butteroni et al. Cloning and expression of the *Olea europaea* allergen Ole e 5, the pollen Cu/Zn superoxide dismutase. 2005, *Int. Arch. Allergy Immunol.* 137 (1), 9-17.

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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