

Recombinant allergen Art v 3 for *Artemisia vulgaris* (Mugwort pollen)

CATALOG NUMBER: RAL0048

LOT NUMBER: #

RECOMBINANT ALLERGEN: *Artemisia vulgaris* Art v 3 is a nonspecific lipid transfer protein type 1 of Mugwort pollen (Gadermaiera *et al.*, 2009).

DESCRIPTION: the *Artemisia vulgaris* lipid transfer protein has been prepared as a recombinant mature protein fused to a his-tag.

PRESENTATION: liquid protein solution

SOURCE: *Pichia pastoris*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein band is at the molecular markers of 14,400 Da and between the molecular markers of 25,000 and 18,400 Da. The relative molecular mass calculated from amino acid sequence without any glycosylation is 14,045.92 Da.

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
his-Art v 3	recombinant allergen with a his-tag
Storage buffer	20 mM phosphate buffer pH 7, 0.1 M KCl and 5 mM EDTA

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

DO₂₈₀ = 0.96
A_{0.1%} (=1 g/l) = 0.686
CONCENTRATION*: 1.40 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: 17%

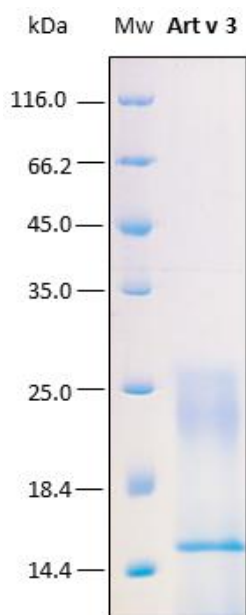
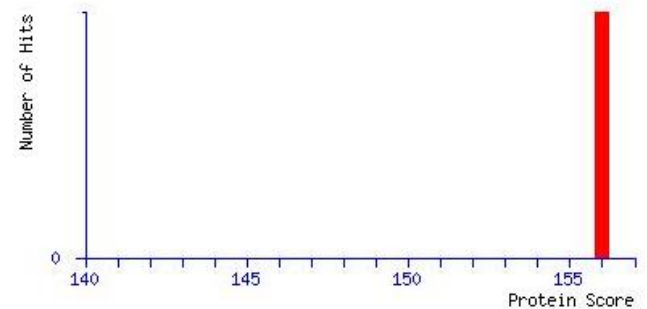


Figure 1. SDS-PAGE analysis (17%) of 5 µl of recombinant allergen. Purity is >95% as determined by gel electrophoresis. The 25 kDa-smear corresponds to the dimer of the protein and the lower band is the monomer. Both bands correspond to the target protein.

3. PROTEIN FINGERPRINT BY MASS SPECTROMETRY

Top Score: 156 for art v 3

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 ($p < 0.05$).



1. [Art](#) [Art](#) **Mass:** 14493 **Score:** 156 **Expect:** 2.5e-016 **Matches:** 11

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:** 1.40 mg/ml
- 2. **TOTAL QUANTITY PER ALIQUOT:** 1 mg
- 3. **TOTAL VOLUME PER ALIQUOT:** 0.75 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 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. The smeary appearance in SDS-PAGE is typical of a different grade of glycosylated protein in gel-development.

RELATED PRODUCTS:

Art v 1, Art v 3 (*E. coli*).

BIBLIOGRAPHY:

Gadermaiera, G, Harrer, A, Girbla, T, Palazzoc, P, Himlyb, M, Vogel, O, Brizab, P, Maric, A, and F Ferreira. Isoform identification and characterization of Art v 3, the lipid-transfer protein of mugwort pollen. 2009. *Molecular Immunology* 46:1919–1924.

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 *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.