

## Recombinant allergen Bet v 4 for *Betula verrucosa* (European white birch)

**CATALOG NUMBER:** RAL0009

**LOT NUMBER:** #

**RECOMBINANT ALLERGEN:** *Betula verrucosa* Bet v 4 is a novel and minor birch pollen allergen (Engel *et al.*, 1997).

**DESCRIPTION:** the *Betula verrucosa* polyclonal Bet v 4 has been prepared as the recombinant mature protein fused to a his-tag.

**PRESENTATION:** liquid protein solution

**SOURCE:** *Escherichia coli*

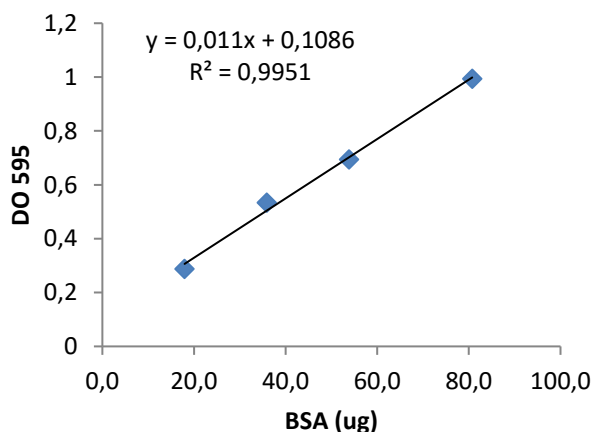
**MOLECULAR WEIGHT:** determined by SDS-PAGE, the protein band is between molecular markers of 18,400 and 14,400 Da, while relative molecular mass calculated from amino acid sequence is 15,911.5 Da.

### BATCH COMPOSITION:

COMPONENTS	COMPOSITION
his-Bet v 4	recombinant allergen with a his-tag
Storage buffer	50 mM HEPES pH 8.5 and 0.1 M KCl

### QUALITY CONTROL:

#### 1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

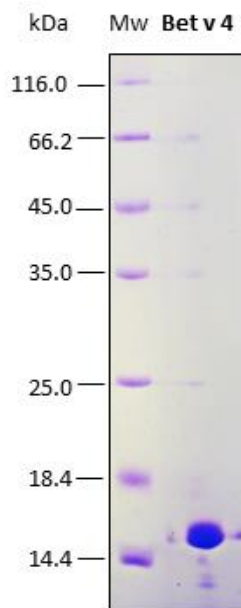


This protein does not contain any Trp residues. Experience shows that this could result in more than 10% error in the computed extinction coefficient. Therefore, we have measured the protein concentration by using the colorimetric assay based on the interaction between Coomassie brilliant blue and the arginine and aromatic residues (Bradford Method) and its maximum absorption shifts from 470 nm to 595 nm. The standard curve was performed with the protein BSA. 40 µl of the protein were analysed.

DO<sub>595</sub> = 0.593

CONCENTRATION: 1.1 mg/ml

#### 2. PURITY CONTROL IN SDS-PAGE: 17%



**Figure 1.** SDS-PAGE analysis (17%) of 4 µl of recombinant allergen. Purity is >95% as determined by gel electrophoresis.

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

#### LOT SPECIFICATIONS:

**1. CONCENTRATION:** 1.1 mg/ml

**2. TOTAL QUANTITY PER ALIQUOT:** 1 mg

**3. TOTAL VOLUME PER ALIQUOT:** 0.954 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.

#### RELATED PRODUCTS:

Bet v 1.

#### BIBLIOGRAPHY:

Engel E, Richter K, Obermeyer G, Briza P, Kungl AJ, Simon B, Auer M, Ebner C, Rheinberger HJ, Breitenbach M, Ferreira F. Immunological and biological properties of Bet v 4, a novel birch pollen allergen with two EF-hand calcium-binding domains. 1997, J Biol Chem. 272:28630-7.

**Bradford, MM.** A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein dye binding. Anal Biochem. 1976, 131:499-503.

**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.

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