

Recombinant allergen κ -casein for *Bos domesticus* (domestic cattle)

CATALOG NUMBER: RAL0030

LOT NUMBER: #

RECOMBINANT ALLERGEN: *Bos domesticus* (domestic cattle) κ -casein (Bernard, *et al.*, 1998).

DESCRIPTION: Bos d 12 or κ -casein, a minor cow's milk allergen and one of the two less abundant caseins (10%), has been prepared as a recombinant mature allergen fused to a trxA and a his-tag in its N-terminus.

PRESENTATION: liquid protein solution

SOURCE: *Escherichia coli*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein band is at the molecular markers of 45,000 Da, while relative molecular mass calculated from amino acid sequence is 38,171.02 Da.

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
TrxA-his- κ -casein	recombinant allergen with a his-tag
Storage buffer	20 mM phosphate buffer pH 8, 0.15 M NaCl, 0.1% polyoxyethylene (10) tridecyl ether and 4 M urea

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

DO₂₈₀ = 1.24
A_{0.1%} (=1 g/l) = 0.901
CONCENTRATION*: 1.37 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%

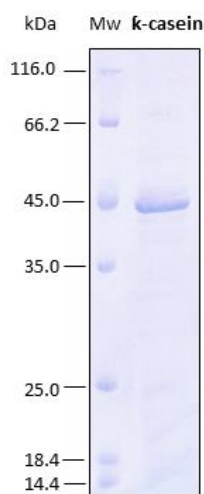


Figure 1. SDS-PAGE analysis (15%) of 6 μ l of the recombinant allergen κ -casein. Purity is approx. 90% as determined by gel electrophoresis.

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

LOT SPECIFICATIONS:

- 1. CONCENTRATION:** 1.37 mg/ml
- 2. TOTAL QUANTITY PER ALIQUOT:** 1 mg
- 3. TOTAL VOLUME PER ALIQUOT:** 0.766 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. 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. 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. **If you put the protein on ice and a precipitate appears, it can be urea crystals. In such a case, it would help if you put the protein at room temperature to dissolve the crystals.**

RELATED PRODUCTS:

α -S1-casein, α -S2-casein, β -casein, α -lactalbumin, β -lactoglobulin.

BIBLIOGRAPHY:

Bernard, H., Créminon, C., Yvon, M. and J.M. Wal. Specificity of the human IgE response to the different purified caseins from cow's milk proteins. 1998. *Int Arch Allergy Immunol.* 115(3):235-44.

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.

Recombinant allergen κ -casein for *Bos domesticum* (domestic cattle)

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