Recombinant allergen αS1-casein for *Bos domesticus* (domestic cattle)

CATALOG NUMBER: RAL0027 **LOT NUMBER:** #

RECOMBINANT ALLERGEN: *Bos domesticus* (domestic cattle) αS1-casein (Schulmeister, *et al*., 2009).

DESCRIPTION: Bos d 9 or αS1-casein, a major cow´s milk allergen and one of the two most abundant caseins (40%), has been prepared as a recombinant mature allergen fused to a his-tag in its N-terminus.

PRESENTATION: liquid protein solution

SOURCE: *Escherichia coli*

MOLECULAR WEIGHT: determined by SDS-PAGE, the protein band is between the molecular markers of 45,000 and 35,000 Da, while relative molecular mass calculated from amino acid sequence is 30,881.4 Da.

BATCH COMPOSITION:

COMPONENTS	COMPOSITION
His αS1-casein	recombinant allergen with a his-tag
Storage buffer	20 mM phosphate buffer pH 8, 0.15 M NaCl, 5 mM EDTA and 0.1% polyoxyethylene (10) tridecyl ether

QUALITY CONTROL:

1. PROTEIN CONCENTRATION DETERMINED ESPECTROPHOTOMETRICALLY

DO_{280} = 0.467
$A_{0.1\,\%}$ (=1 g/l) = 0.887
CONCENTRATION*: 0.526 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

2. PURITY CONTROL IN SDS-PAGE: 12%

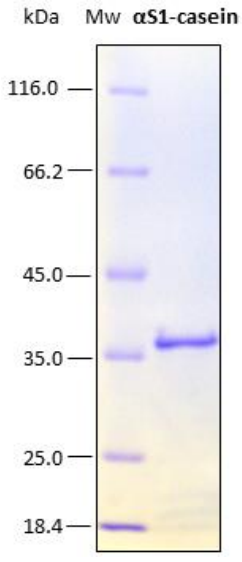

Figure 1. SDS-PAGE analysis (12%) of 2 µl of the recombinant allergen αS1-casein. Purity is > 95% as determined by gel electrophoresis.

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

LOT SPECIFICATIONS:

1. CONCENTRATION: 0.526 mg/ml

2. TOTAL QUANTITY PER ALIQUOT: 0.5 mg

3. TOTAL VOLUME PER ALIQUOT: 0.481 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 -20ºC to -80ºC.

5. OBSERVATIONS: proteins should be maintained frozen at high concentrations. In order to defrost the protein, maintain the aliquot at 25ºC 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:

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

BIBLIOGRAPHY:

Schulmeister, *et al*. Cloning, Expression, and Mapping of Allergenic Determinants of αS1-Casein, a Major Cow's Milk Allergen. 2009. *J Immunol*; 182:7019-7029

Gill SC, von Hippel PH. Calculation of protein extinction coefficients from amino acid sequence data. *Anal Biochem.* 1989 Nov 1;182(2):319-26.

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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

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