

Case study - Cereals

Immunological Characterization of Polyclonal Antisera Prepared Against Recombinant Rice RAG2 and Its Application in Detection of 14-16 kDa α -amylase/trypsin Inhibitors from Processed Foods.

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Overview

- **Keywords:** Rice (*Oryza sativa*), RAG2, α -amylase/trypsin inhibitor, recombinant protein, polyclonal antisera, processed food.
- **Aim of the study:** Allergen identification in processed food
- **Application:** SDS-PAGE analysis
- **Sample type:** Cereals
- **Material:** FastPrep-24™ instrument, 2 ml Lysing Matrix D tubes, Lab Mixer
- **Buffer:** Buffer A (30 mM Tris-HCl, pH 8.0 supplemented with 1 M NaCl)

Protocol and Parameters

1. Grains of various cereals were crushed into flour with a Lab Mixer
2. 100 mg of grain flour was transferred to a 2 ml Lysing Matrix D tubes
3. 1 ml of Buffer A was added to the tubes
4. After brief vortexing, the tubes were incubated on ice for 1 h
5. The tubes were then set up in a FastPrep® System at speed 6.0 for 40 sec
6. After centrifugation at 15,000 x g, 4 °C for 10 min, the supernatant was dispensed into several tubes and stored at -30 °C

Conclusion

- The use of FastPrep® system in combination with lysing matrix D allowed isolation and characterization of the main allergens in rice grains.

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