

This is a provisional English translation of an excerpt from the original full report.

Safety Assessment Report

Transglutaminase produced using JPBL015 strain

(Genetically Modified Food)

Food Safety Commission of Japan (FSCJ) July 2024

ABSTRACT

The FSCJ conducted a safety assessment of "Transglutaminase produced using the JPBL015 strain."

This additive is a transglutaminase produced using the JPBL015 strain, which was developed by introducing a transglutaminase transgene derived from the *Streptomyces mobaraensis* NBRC 13819 strain into the *Bacillus licheniformis* Ca63 strain as a host. This additive is utilized for a wide variety of purposes, such as improving the texture, water-binding capacity, and product yield of many protein-containing foods, including seafood products such as kamaboko¹ and meat products such as ham and sausage, due to its properties of gelatinization and adhesion, *etc.*, by forming cross-linked structures between proteins.

The safety assessment was conducted referring to the "Standards for Safety Assessments of Food Additives Produced Using Genetically Modified Microorganisms.²" Specifically, evaluations were made on the donor of the inserted gene, the safety of the inserted gene, including the identification of inserted base sequences, and the toxicity and allergenicity of the protein produced from the inserted gene, which indicated no additional factors that could impair safety in this additive compared to conventional ones.

Considering the above, "Transglutaminase produced using the JPBL015 strain" is considered unlikely to pose safety concerns relevant to human health.

¹ Kamaboko is a type of fish cake manufactured by heating (often steaming) deboned and pureed fish

² Decision of the FSCJ dated March 25, 2004