Tohoku Univ. Technology

Investigation method of breast disease

Cyclophilin A levels can be used to determine the likelihood of developing breast disease

Overview

Mastitis in dairy cattle is considered to be one of the most intractable diseases in livestock, and it is known that it leads to a decrease in milk production and an increase in treatment costs, resulting in a large economic loss. In order to reduce the economic loss, early detection of mastitis is essential. However, the PL test, which is an existing mastitis detection method, does not lead to early detection because mastitis already showing degeneration is used as a sample. Therefore, a Chemical Luminescence measurement method is regarded as promising. However, a special apparatus is required to measure the Chemical Luminescence ability, and from the viewpoint of economy and difficulty, it is not suitable as a routine method for each dairy farmer.

The present invention makes it possible to provide a method and a biomarker that contribute to the early detection of mastitis in a simple and rapid manner. The present invention is characterized by comprising a step of detecting cyclophilin A in milk collected from the udder of a subject and a step of determining the occurrence or possibility of occurrence of a mammary gland disease based on the amount of cyclophilin A. When the amount of cyclophilin A in milk is larger than that collected from a healthy udder, it is determined that a mammary gland disease has occurred or is likely to occur in the udder of the subject.

Product Application

- Bovine mastitis diagnostic kit
- Veterinary care

IP Data

IP No.	:	JP6176741,US10,012,649
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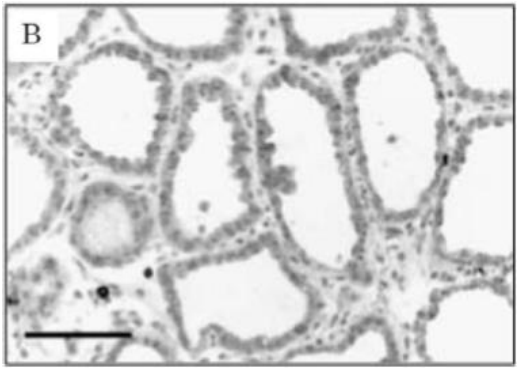
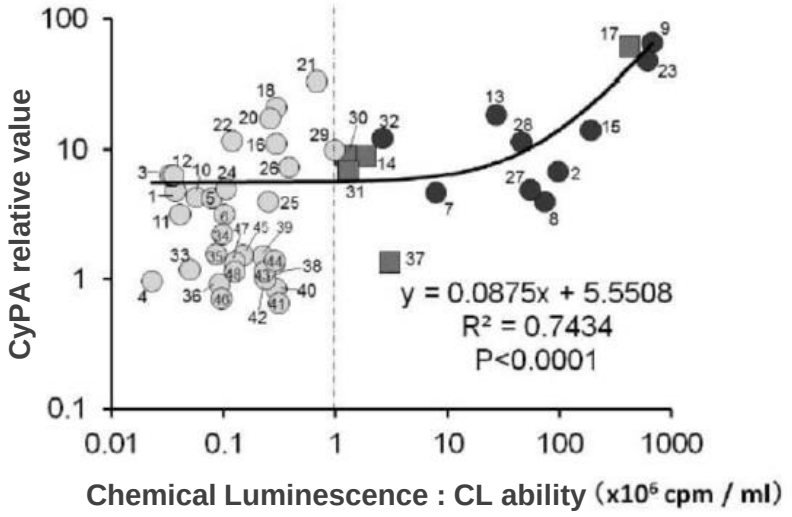


Cyclophilin A was strongly expressed in mammary epithelial cells, milk, and sites of cellular infiltration in mastitic mammary tissue



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