[CLAIMS**]**

[Claim 1]

An antibacterial composition against carbapenem-resistant gram-negative bacteria, the antibacterial composition comprising adenylate kinase (ADK) protein as an active ingredient, wherein the ADK protein is represented by SEQ ID NO: 1**.**

[Claim 2]

The antibacterial composition of claim 1, wherein the ADK protein is derived from Mycobacterium tuberculosis.

[Claim 3]

The antibacterial composition of claim 1, wherein the ADK protein is encoded by a base sequence represented by SEQ ID NO: 2.

[Claim 4]

An antibacterial quasi-drug against carbapenem-resistant gram-negative bacteria, the antibacterial quasi-drug comprising adenylate kinase (ADK) protein as an active ingredient, wherein the ADK protein is represented by SEQ ID NO: 1.

[Claim 5]

An antibacterial food additive against carbapenem-resistant gram-negative bacteria, the antibacterial food additive comprising adenylate kinase (ADK) protein as an active ingredient,

wherein the ADK protein is represented by SEQ ID NO: 1.

[Claim 6]

An antibacterial feed additive against carbapenem-resistant gram-negative bacteria, the antibacterial feed additive comprising adenylate kinase (ADK) protein as an active ingredient,

wherein the ADK protein is represented by SEQ ID NO: 1.

[Claim 7]

A pharmaceutical composition for preventing or treating infectious diseases caused by carbapenem-resistant gram-negative bacteria, the pharmaceutical composition comprising adenylate kinase (ADK) protein as an active ingredient,

wherein the ADK protein is represented by SEQ ID NO: 1.

[Claim 8]

A food composition for preventing or alleviating infectious diseases caused by carbapenem-resistant gram-negative bacteria, the food composition comprising adenylate kinase (ADK) protein as an active ingredient,

wherein the ADK protein is represented by SEQ ID NO: 1.