【CLAIMS】

【Claim 1】

A *Corynebacterium* sp. microorganism with weakened activity of LacI family DNA-binding transcriptional regulator protein compared to a parent strain or wild type,

wherein the *Corynebacterium* sp. microorganism has increased productivity of L-glutamic acid compared to a parent strain or wild type in which the activity of the LacI family DNA-binding transcriptional regulator protein is not weakened, and

wherein the LacI family DNA-binding transcriptional regulator protein comprises an amino acid sequence of SEQ ID NO: 3.

【Claim 2】

The microorganism according to claim 1, wherein the LacI family DNA-binding transcriptional regulator protein is derived from the genus of *Corynebacterium*.

【Claim 3】

The microorganism according to claim 1, wherein the weakened activity of LacI family DNA-binding transcriptional regulator protein is caused by (1) deletion of a gene encoding the LacI family DNA-binding transcriptional regulator protein or (2) mutation of the codon corresponding to the 310th amino acid of the amino acid sequence of SEQ ID NO: 3 to form a stop codon.

【Claim 4】

The microorganism according to claim 1, wherein the LacI family DNA-binding transcriptional regulator protein is encoded by a polynucleotide described as the nucleotide sequence of SEQ ID NO: 4.

【Claim 5】

The microorganism according to claim 1, wherein the *Corynebacterium* sp. microorganism is *Corynebacterium glutamicum*.

【Claim 6】

The microorganism according to claim 1, wherein the productivity of L-glutamic acid is increased by 5% or more compared to a parent strain or wild type in which the activity of the LacI family DNA-binding transcriptional regulator protein is not weakened.

【Claim 7】

A production method of L-glutamic acid, comprising culturing a *Corynebacterium* sp. microorganism with weakened activity of LacI family DNA-binding transcriptional regulator protein compared to a parent strain or wild type in a medium,

wherein the *Corynebacterium* sp. microorganism has increased productivity of L-glutamic acid compared to a parent strain or wild type in which the activity of the LacI family DNA-binding transcriptional regulator protein is not weakened, and

wherein the LacI family DNA-binding transcriptional regulator protein comprises an amino acid sequence of SEQ ID NO: 3.

【Claim 8】

The production method of L-glutamic acid according to claim 7, further comprising recovering L-glutamic acid from the medium or microorganism after the culturing.

【Claim 9】

The production method of L-glutamic acid according to claim 7, wherein the LacI family DNA-binding transcriptional regulator protein is derived from the genus of *Corynebacterium*.

【Claim 10】

The production method of L-glutamic acid according to claim 7, wherein the weakened activity of LacI family DNA-binding transcriptional regulator protein is caused by (1) deletion of a gene encoding the LacI family DNA-binding transcriptional regulator protein or (2) mutation of the codon corresponding to the 310th amino acid of the amino acid sequence of SEQ ID NO: 3 to form a stop codon.

【Claim 11】

The production method of L-glutamic acid according to claim 7, wherein the LacI family DNA-binding transcriptional regulator protein is encoded by a polynucleotide described as the nucleotide sequence of SEQ ID NO: 4.

【Claim 12】

The production method of L-glutamic acid according to claim 7, wherein the *Corynebacterium* sp. microorganism is *Corynebacterium glutamicum*.

【Claim 13】

The production method of L-glutamic acid according to claim 7, wherein the productivity of L-glutamic acid of the microorganism is increased by 5% or more compared to a parent strain or wild type in which the activity of the LacI family DNA-binding transcriptional regulator protein is not weakened.