Claims

1. A lactic acid bacterium is *Lactobacillus reuteri* NK33 (KCCM12090P).

2. The lactic acid bacterium, according to claim 1, wherein the *Lactobacillus reuteri* NK33 (KCCM12090P) comprises a 16S rDNA sequence of SEQ ID NO: 1.

3. A pharmaceutical composition for preventing or treating a neurological mental disease, containing *Lactobacillus reuteri* NK33 (KCCM12090P).

4. The pharmaceutical composition for preventing or treating a neurological mental disease, according to claim 3, wherein the *Lactobacillus reuteri* NK33 (KCCM12090P) is a live bacterial cell thereof, a dead bacterial cell thereof, a culture product thereof, a crush thereof or an extract thereof.

5. The pharmaceutical composition for preventing or treating a neurological mental disease, according to claim 3, wherein the pharmaceutical composition further comprises *Bifidobacterium adolescentis* NK98 (KCCM12297P).

6. The pharmaceutical composition for preventing or treating a neurological mental disease, according to any one of claims 3 to 5, wherein the neurological mental disease is a neurodegenerative disease or a mental disorder.

7. The pharmaceutical composition for preventing or treating a neurological mental disease, according to claim 6, wherein the mental disorder is one or more selected from

the group comprising anxiety, depression, mood disorder, insomnia, delusional disorder, obsessive disorder, migraine, stress, memory disorder, cognitive disorder and disturbance attention.

8. The pharmaceutical composition for preventing or treating a neurological mental disease, according to claim 6, wherein the neurodegenerative disease is one or more selected from the group comprising Parkinson's disease, Huntington's disease, Alzheimer's disease, amyotrophic lateral sclerosis, spinocerebellar atrophy, Tourette's syndrome, Friedrich's ataxia, Machado-Joseph's disease, dementia, dystonia and progressive supranuclear palsy.

9. The pharmaceutical composition for preventing or treating a neurological mental disease, according to any one of claims 3 to 5, wherein the pharmaceutical composition further comprises *Bifidobacterium adolescentis* IM38 (KCCM11807P).

10. A health functional food for preventing or improving a neurological mental disease, comprising *Lactobacillus reuteri* NK33 (KCCM12090P).

11. A pharmaceutical composition for preventing or treating an inflammatory disease, comprising *Lactobacillus reuteri* NK33 (KCCM12090P).

12. A health functional food for preventing or improving an inflammatory disease, comprising *Lactobacillus reuteri* NK33 (KCCM12090P).

13. The health functional food for preventing or improving a neurological mental disease, according to claim 10, wherein the health functional food further comprises *Bifidobacterium adolescentis* NK98 (KCCM12297P).

14. The pharmaceutical composition for preventing or treating an inflammatory disease, according to claim 11, wherein the pharmaceutical composition further comprises *Bifidobacterium adolescentis* NK98 (KCCM12297P).

15. The health functional food for preventing or improving an inflammatory disease, according to claim 12, wherein the health functional food further comprises *Bifidobacterium adolescentis* NK98 (KCCM12297P).