On the other hand, there is a further demand for obtaining novel EPSs with immunostimulatory action.

Citation List

Non Patent Literature

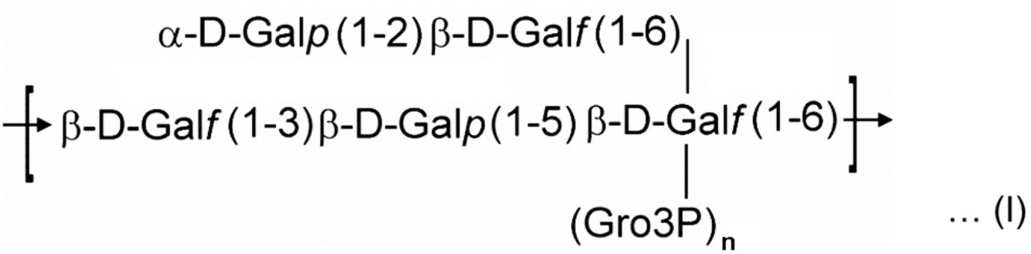
[0005]

Non Patent Literature 1: Marie-Rose Van Calsteren, et al., Carbohydrate Research, 413 (2015) 115-122

Non Patent Literature 2: Seiya Makino, Milk Science, Vol. 58, No. 2 (2009)

Summary

[0005a] In one aspect, disclosed herein is an acidic exopolysaccharide having a repeating structure comprising a string of repeating units of the following formula (I):



... (I)

wherein in the formula (I), n denotes an integer of 0 or 1, independently for each repeating unit.

[0005b] In another aspect, disclosed herein is a composition for immunostimulation, comprising the acidic exopolysaccharide as disclosed herein as an active ingredient.

[0005c] In another aspect, disclosed herein is a food or a medicament for immunostimulation, comprising the acidic exopolysaccharide as disclosed herein as an active ingredient.

[0005d] In another aspect, disclosed herein is a use of the acidic exopolysaccharide as disclosed herein, the composition as disclosed herein, or the food as disclosed herein, in the manufacture of a medicament for immunostimulation.

[0005e] In another aspect, disclosed herein is a use of the acidic exopolysaccharide as disclosed herein, in the manufacture of a composition, or food for immunostimulation.

Technical Problem

[0006]

An object of the present invention is to further provide a polysaccharide having immunostimulatory activity.

Solution to Problem

[0007]

As a result of extensive studies to solve the above problem, the present inventors have succeeded in obtaining an exopolysaccharide (EPS) having immunostimulatory activity, which has a novel repeating structure comprising a string (repetition) of repeating units in which the sugar residues are only galactose residues, from the culture of strain OLL1073R-1, and thereby completed the present invention.

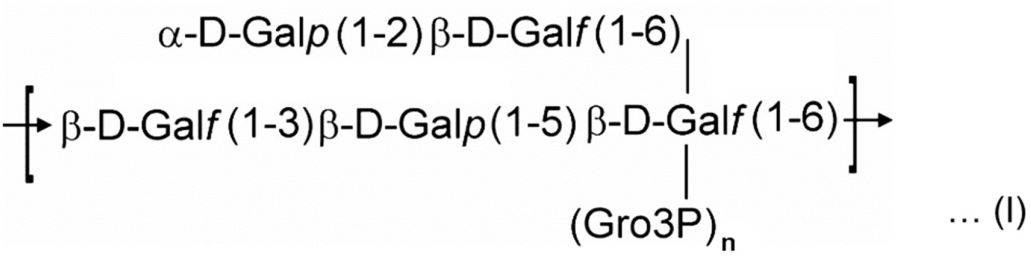
[0008]

That is, the present invention includes the following aspects.

[1] An acidic exopolysaccharide having a repeating structure comprising a string of repeating units of the following formula (I):

Claims

[Claim 1] An acidic exopolysaccharide having a repeating structure comprising a string of repeating units of the following formula (I):



... (I)

wherein in the formula (I), n denotes an integer of 0 or 1, independently for each repeating unit.

[Claim 2] The acidic exopolysaccharide according to claim 1, wherein the exopolysaccharide is isolated.

[Claim 3] The acidic exopolysaccharide according to claim 1 or 2, wherein the exopolysaccharide is isolated from a lactic acid bacterial culture comprising *Lactobacillus delbrueckii* subsp. *bulgaricus*.

[Claim 4] The acidic exopolysaccharide according to claim 1, wherein the exopolysaccharide is derived from *Lactobacillus delbrueckii* subsp. *bulgaricus* strain OLL1073R-1 (accession number FERM BP-10741).

[Claim 5] A composition for immunostimulation, comprising the acidic exopolysaccharide according to claim 1 as an active ingredient.

[Claim 6] A food or a medicament for immunostimulation, comprising the acidic exopolysaccharide according to claim 1 as an active ingredient.

[Claim 7] Use of the acidic exopolysaccharide according to claim 1, the composition according to claim 5, or the food according to claim 6, in the manufacture of a medicament for immunostimulation.

[Claim 8] Use of the acidic exopolysaccharide according to claim 1, in the manufacture of a composition, or food for immunostimulation.