[Non Patent Literature 6] "Clinical Cancer Research", (USA), 2002; 8 (12): 3702-3709
[Non Patent Literature 7] "Cancer Research", (USA), 2013; 73 (1): 62-73
[Non Patent Literature 8] "Cancer Research", (USA), 2016; 76 (13): 3756-3766

[Summary of Invention]

In one aspect, the disclosure provides a use of a human-derived cell in the manufacture of a pharmaceutical composition for treating or preventing a cancer, wherein the cell expresses exogenous CD1d and has α-GalCer loaded on the cell surface, and wherein the composition is to be administered to a human such that a single dose of α-GalCer loaded on the cell surface is 1.7 ng to 275 ng per kg body weight of the human.

In one aspect, the disclosure provides a method for producing a human-derived cell that expresses exogenous CD1d and has α-GalCer loaded on the cell surface, wherein the cell is to be administered to a human such that a single dose of α-GalCer loaded on the cell surface ranges from 1.7 ng to 275 ng per kg body weight of the human, and wherein the method comprises the step of culturing human-derived cells expressing exogenous CD1d in a culture medium containing 56 ng/mL to 3000 ng/mL α-GalCer, and the step of measuring the amount of α-GalCer

loaded on the cells obtained by the culture step, and selecting a cell wherein the amount of α-GalCer loaded on the cell surface is in the range of 3.9 to 275 ng per 1×10^6 cells.

[Technical Problem]

[0009]

An object of the present invention is to provide an effective and safe method for treating or preventing a cancer using aAVC.

[Solution to Problem]

[0010]

The present inventors have conducted diligent studies on the clinical application of aAVC. The present inventors have found that the amount of α-GalCer loaded on aAVC in the course of aAVC manufacturing processes varies depending on the type of cells and conditions for pulsing cells with α-GalCer, etc. The need of standardizing the amount of α-GalCer loaded on aAVC has thereby been found in order to produce aAVC as medicaments. Accordingly, the present inventors have established a method for measuring the amount of α-GalCer loaded on cell surface in order to quantify the amount of

[Claim 1]

Use of a human-derived cell in the manufacture of a pharmaceutical composition for treating or preventing a cancer,
wherein the cell expresses exogenous CD1d and has α-GalCer loaded on the cell surface,
and wherein the composition is to be administered to a human such that a single dose of α-GalCer loaded on the cell surface is 1.7 ng to 275 ng per kg body weight of the human.

[Claim 2]

The use according to claim 1, wherein the human-derived cell expresses an exogenous cancer antigen.

[Claim 3]

The use according to claim 1 or 2, wherein the CD1d is human CD1d.

[Claim 4]

The use according to any of claims 1 to 3, wherein the human-derived cell is a human embryonic kidney cell 293 (HEK293)-derived cell.

[Claim 5]

The use according to any of claims 1 to 4, wherein the amount of α-GalCer loaded on the cell surface is in the range of 3.9 to 275 ng per 1×10^6 cells.

[Claim 6]

A method for producing a human-derived cell that expresses exogenous CD1d and has α-GalCer loaded on the

cell surface, wherein the cell is to be administered to a human such that a single dose of α-GalCer loaded on the cell surface ranges from 1.7 ng to 275 ng per kg body weight of the human, and wherein the method comprises the step of culturing human-derived cells expressing exogenous CD1d in a culture medium containing 56 ng/mL to 3000 ng/mL α-GalCer, and the step of measuring the amount of α-GalCer loaded on the cells obtained by the culture step, and selecting a cell wherein the amount of α-GalCer loaded on the cell surface is in the range of 3.9 to 275 ng per 1×10^6 cells.