Claims

[Claim 1]

A method for culturing pancreatic progenitor cells derived from pluripotent stem cells, the method comprising step (A) of three-dimensionally culturing pancreatic progenitor cells derived from pluripotent stem cells in a medium containing (1) a factor belonging to the epidermal growth factor (EGF) family, a factor belonging to the fibroblast growth factor (FGF) family, or both of them, and (2) a Wnt agonist,

wherein the three-dimensional culture is suspension culture of aggregates of pancreatic progenitor cells, and

wherein the Wnt agonist is both a protein belonging to the R-spondin family and a GSK inhibitor.

[Claim 2]

The method according to claim 1, wherein the medium is a serum-free medium.

[Claim 3]

The method according to claim 1, wherein the culture is culture in the absence of feeder cells.

[Claim 4]

The method according to claim 1, wherein the pluripotent stem cells are iPS cells or ES cells.

[Claim 5]

The method according to claim 1, wherein the pluripotent stem cells are derived from a human.

[Claim 6]

The method according to claim 1, further comprising

step (B) of subculturing the pancreatic progenitor cells obtained in step A.

[Claim 7]

The method according to claim 1 for use in purification of pancreatic progenitor cells.

[Claim 8]

The method according to claim 1, further comprising step (C) of preparing iPS cells, wherein pancreatic progenitor cells derived from the iPS cells are used in step A.

[Claim 9]

The method according to claim 1, further comprising step (D) of inducing the differentiation of pluripotent stem cells into pancreatic progenitor cells, wherein the pancreatic progenitor cells are used in step A.

[Claim 10]

A method for producing islet cells from pancreatic progenitor cells derived from pluripotent stem cells, the method comprising step (E) of inducing the differentiation of pancreatic progenitor cells cultured by the method according to claim 1 into islet cells.

[Claim 11]

A method for cryopreserving pancreatic progenitor cells derived from pluripotent stem cells, the method comprising step (F) of freezing pancreatic progenitor cells cultured by the method according to claim 1.