Claims

Claim 1

A method for growing mesenchymal stem cells while maintaining undifferentiated state of the mesenchymal stem cells, comprising the steps of:

concentrating cord blood-derived mesenchymal stem cells with use of an antibody that specifically recognizes blood cells, to generate a concentrated sample of cord blood-derived mesenchymal stem cells; and

culturing the concentrated sample thus generated in a medium containing SHH, FGF1, or FGF2.

Claim 2

The method according to claim 1, wherein

the medium further contains SCF.

Claim 3

The method according to claim 2, wherein

the medium further contains Flt-3L, IL-3, and IL-6.

Claim 4

A method for concentrating mesenchymal stem cells, comprising the step of:

concentrating cord blood-derived mesenchymal stem

cells with use of antibody beads that are specifically bound to blood cells.

Claim 5

The method according to claim 4, wherein

the antibody beads each comprise a bead and an antibody attached to the bead, and the antibody is selected from the group consisting of an anti-Glycophorin A antibody, an anti-CD2 antibody, an anti-CD3 antibody, an anti-CD11c antibody, an anti-CD11b antibody, an anti-CD14 antibody, an anti-CD16 antibody, an anti-CD19 antibody, an anti-CD24 antibody, an anti-CD56 antibody, an anti-CD61 antibody, and an anti-CD66b antibody.

Claims

Claim 1

A method for growing mesenchymal stem cells while maintaining undifferentiated state of the mesenchymal stem cells, comprising the steps of:

concentrating mesenchymal stem cells derived from cord blood with use of an antibody that specifically recognizes blood cells, to generate a concentrated sample of mesenchymal stem cells derived from cord blood; and

culturing the concentrated sample thus generated in a medium containing SHH, FGF1, or FGF2,

the medium further containing SCF.

Claim 2

The method according to claim 1, wherein the medium further contains Flt-3L, IL-3, and IL-6.

Claim 3

The method according to claim 1 or 2, wherein the cord blood is human cord blood.

Claim 4

A method for concentrating mesenchymal stem cells, comprising the step of:

concentrating mesenchymal stem cells derived from cord blood with use of antibody beads that are specifically bound to blood cells,

the antibody beads each being bound to an anti-Glycophorin

A antibody, an anti-CD2 antibody, an anti-CD3 antibody, an anti-CD11c antibody, an anti-CD11b antibody, an anti-CD14 antibody, an anti-CD16 antibody, an anti-CD19 antibody, an anti-CD24 antibody, an anti-CD56 antibody, an anti-CD61 antibody, and an anti-CD66b antibody.

Claim 5

The method according to claim 4, wherein the cord blood is human cord blood.