[CLAIMS]

1. A method of preparing a cell population containing stem cells and/or progenitor cells positive for expression of Tie2 (tyrosine kinase with Ig and EGF homology domain-2) (hereinafter referred to as "Tie2-positive stem/progenitor cells"), the method comprising:

an amplification culture stage to enhance expression of Tie2 in the Tie2 positive stem/progenitor cells and amplify the Tie2-positive stem/progenitor cells in the cell population, wherein the amplification culture stage comprises a step of performing a method of culturing the cell population containing Tie2-positive stem/progenitor cells while present in a non-digested tissue and in an undestroyed tissue microenvironment (hereinafter, the method is referred to as a "first culture method"), and

wherein the amplification culture stage further comprises a step of recovering the post-culture cell population containing the Tie2-positive stem/progenitor cells.

2. The preparation method according to claim 1, wherein the amplification culture stage further comprises a step of performing a method of culturing the cell population containing the Tie2-positive stem/progenitor cells in a culture medium containing at least one kind of Tie2 expression enhancer other than growth factors (hereinafter, the method is referred to as "second culture method"),

wherein the Tie2 expression enhancer other than growth factors is an extract derived from a plant of the genus *Cinnamomum*.

3. The preparation method according to claim 1 or 2, wherein the non-digested tissue is a nucleus pulposus tissue of an intervertebral disc, and the Tie2-positive stem/progenitor cells are Tie2-positive stem/progenitor cells derived from the nucleus pulposus tissue of the intervertebral disc.

4. The preparation method according to any one of claims 1 to 3, wherein the non-

digested tissue is a tissue obtained by thawing a cryopreserved tissue.

5. The preparation method according to any one of claims 1 to 4, wherein the amplification culture stage further comprises a step of culturing the cell population containing the Tie2-positive stem/progenitor cells in a culture medium only containing, as a Tie2 expression enhancer, a growth factor having a Tie2 expression-enhancing effect.

6. A method for preparing, from a cell population containing Tie2-positive stem/progenitor cells, a cell population containing target cells differentiated from the Tie2-positive stem/progenitor cells, the method comprising:

"the amplification culture stage" according to any one of claims 1 to 5 ; and

a differentiation culture stage,

wherein the differentiation culture stage comprises a step of performing a method of culturing the cell population containing Tie2-positive stem/progenitor cells by using cultureware with a culture surface having undergone cell attachment-increasing treatment (hereinafter, the method is referred to as a "third culture method"), and optionally,

wherein the amplification culture stage further comprises a step of performing the third culture method.

7. The preparation method according to claim 6, wherein the cell attachment-increasing treatment in the amplification culture stage is treatment of applying a coating agent containing an extracellular matrix and/or a polyamino acid, preferably, gelatin.

8. The preparation method according to claim 6, wherein the cell attachment-increasing treatment of the third culture method in the differentiation culture stage is treatment of applying a coating agent containing an extracellular matrix and/or a polyamino acid, preferably, at least one or more kind selected from the group consisting

of type IV collagen, fibronectin, and polylysine.

9. A method for preparing, from a cell population containing Tie2-positive stem/progenitor cells, a cell population containing target cells differentiated from the Tie2-positive stem/progenitor cells, the method comprising

the amplification culture stage according to any one of claims 1 to 5; and

a differentiation culture stage, wherein the differentiation culture stage comprises a step of performing:

a method of culturing the cell population containing Tie2-positive stem/progenitor cells while suppressing formation of spheroid colonies in a culture medium containing an extracellular matrix-degrading agent (herein after, the method is referred to as “ fourth culture method").

10. The preparation method according to claim 9, wherein the extracellular matrix-degrading agent of the fourth culture method comprises at least a protease having activity to degrade type II collagen.

11. The preparation method according to any one of claims 6 to 10, wherein the target cells are cells expressing at least type II collagen, preferably, nucleus pulposus cells.

12. The preparation method according to any one of claims 6 to 11, wherein a cell population in which the Tie2-positive stem/progenitor cells remain is obtained through the differentiation culture stage.

13. A cell population-preparing method comprising:

an amplification culture stage to enhance expression of Tie2 in the Tie2-positive stem/progenitor cells and amplify the Tie2-positive stem/progenitor cells in the cell population; and

a differentiation culture stage to induce differentiation from the Tie2-positive

stem/progenitor cells into the target cells after the amplification culture stage,

wherein the amplification culture stage comprises a step of performing both the first culture method according to claim 1 and the second culture method according to claim 2 and optionally a step of performing the third culture method according to claim 6, and

wherein the differentiation culture stage comprises a step of performing both the third culture method according to claim 6 and the fourth culture method according to claim 9.

14. The cell population-preparing method according to claim 12, wherein the step of performing both the first culture method and the second culture method is a fused method.

15. The cell population-preparing method according to claim 13 or 14, wherein the step of performing both the third culture method and the fourth culture method is a fused method.