17. An in vitro subculture method for an adherent cell, sequentially comprising the following steps (a) to (d):

(a) removing a medium in a culture vessel to which an adherent cell is adhered and washing the adherent cell with a cell-washing solution comprising a physiological aqueous solution added with trehalose or its derivative or a salt thereof;

(b) detaching the adherent cell from the culture vessel by proteolytic enzyme treatment;

(c) suspending the adherent cell detached from the culture vessel in a protein-containing physiological aqueous solution to stop the proteolytic enzyme treatment; and

(d) subculturing a portion of the cell suspension using a fresh culture vessel.

18. The in vitro subculture method according to claim 17, wherein the adherent cell is a mesenchymal stem cell.

19. The in vitro subculture method according to claim 17 or 18, wherein the cell-washing solution of the step (a) comprises trehalose or its derivative or a salt thereof in a concentration of 1 to 15 (w/v)%.

20. The in vitro subculture method according to any one of claims 17 to 19, wherein the proteolytic enzyme of the step (b) is trypsin.

21. The in vitro subculture method according to any one of claims 17 to 20, wherein the protein-containing physiological aqueous solution of the step (c) further comprises trehalose or its derivative or a salt thereof.

22. The in vitro subculture method according to any one of claims 17 to 21, wherein the protein-containing physiological aqueous solution of the step (c) is a serum-containing basal medium for animal cell culture.

23. The in vitro subculture method according to any one of claims 17 to 22, further comprising the step of (p) removing the solution in the cell suspension and washing the adherent cells with a physiological aqueous solution or protein-containing physiological aqueous solution, between the steps (c) and (d).

24. The in vitro subculture method according to claim 23, wherein the physiological aqueous solution or protein-containing physiological aqueous solution of the step (p) further comprises trehalose or its derivative or a salt thereof.

25. A kit for in vitro subculture of an adherent cell, comprising:
a cell-washing solution for washing an adherent cell before detaching the adherent cell from a culture vessel by proteolytic enzyme treatment, comprising a physiological aqueous solution added with trehalose or its derivative or a salt thereof; and
a package insert describing an effect of suppressing cell death due to proteolytic enzyme treatment.