

CLAIMS

1. A tissue regeneration-promoting agent, comprising any one of:

(a) an HMGB1 protein;

5 (b) a cell that secretes an HMGB1 protein;

(c) a vector into which a DNA encoding an HMGB1 protein is inserted;

(d) an HMGB2 protein

(e) a cell that secretes an HMGB2 protein;

(f) a vector into which a DNA encoding an HMGB2 protein is inserted;

10 (g) an HMGB3 protein;

(h) a cell that secretes an HMGB3 protein;

(i) a vector into which a DNA encoding an HMGB3 protein is inserted;

(j) an S100A8 protein;

(k) a cell that secretes an S100A8 protein;

15 (l) a vector into which a DNA encoding an S100A8 protein is inserted;

(m) an S100A9 protein;

(n) a cell that secretes an S100A9 protein;

(o) a vector into which a DNA encoding an S100A9 protein is inserted;

(p) a cell or tissue extract; and

20 (q) a heparin-binding fraction of a cell or tissue extract;

wherein the agent is to be administered to a tissue other than a tissue in need of regeneration.

2. The agent of claim 1, which is to be administered parenterally.

25 3. The agent of claim 2, which is to be administered by injection.

4. The agent of claim 1, which is to be administered intravascularly, intramuscularly, subcutaneously, intradermally, or intraperitoneally.

30 5. The agent of any one of claims 1 to 4, wherein the cell or tissue extract is produced by a method comprising the step of immersing a cell or tissue in a solvent.

6. The agent of any one of claims 1 to 4, wherein the heparin-binding fraction of a cell or tissue extract is produced by a method comprising the steps of:

35 (a) immersing a cell or tissue in a solvent;

(b) contacting immobilized heparin with the extract prepared in step (a); and

(c) eluting a heparin-binding fraction from the immobilized heparin.

7. Use of the agent of any one of claims 1 to 6 in the manufacture of a medicament for promoting the regeneration of a nerve, bone, or skin tissue.

8. Use of a composition in producing a tissue regeneration-promoting agent, wherein the composition comprises any one of:

(a) an HMGB1 protein;

(b) a cell that secretes an HMGB1 protein;

(c) a vector into which a DNA encoding an HMGB1 protein is inserted;

(d) an HMGB2 protein

(e) a cell that secretes an HMGB2 protein;

(f) a vector into which a DNA encoding an HMGB2 protein is inserted;

(g) an HMGB3 protein;

(h) a cell that secretes an HMGB3 protein;

(i) a vector into which a DNA encoding an HMGB3 protein is inserted;

(j) an S100A8 protein;

(k) a cell that secretes an S100A8 protein;

(l) a vector into which a DNA encoding an S100A8 protein is inserted;

(m) an S100A9 protein;

(n) a cell that secretes an S100A9 protein;

(o) a vector into which a DNA encoding an S100A9 protein is inserted;

(p) a cell or tissue extract; and

(q) a heparin-binding fraction of a cell or tissue extract;

wherein the agent is to be administered to a tissue other than a tissue in need of regeneration.

9. The use of claim 8, wherein the agent is to be administered parenterally.

10. The use of claim 9, wherein the administration is injection.

11. The use of claim 8, wherein the agent is to be administered intravascularly, intramuscularly, subcutaneously, intradermally, or intraperitoneally.

12. The use of any one of claims 8 to 11, wherein the agent is an agent for promoting the regeneration of a nerve, bone, or skin tissue.

13. A composition for use in a method of promoting tissue regeneration, comprising any one of:

- (a) an HMGB1 protein;
- (b) a cell that secretes an HMGB1 protein;
- (c) a vector into which a DNA encoding an HMGB1 protein is inserted;
- 5 (d) an HMGB2 protein
- (e) a cell that secretes an HMGB2 protein;
- (f) a vector into which a DNA encoding an HMGB2 protein is inserted;
- (g) an HMGB3 protein;
- (h) a cell that secretes an HMGB3 protein;
- 10 (i) a vector into which a DNA encoding an HMGB3 protein is inserted;
- (j) an S100A8 protein;
- (k) a cell that secretes an S100A8 protein;
- (l) a vector into which a DNA encoding an S100A8 protein is inserted;
- (m) an S100A9 protein;
- 15 (n) a cell that secretes an S100A9 protein;
- (o) a vector into which a DNA encoding an S100A9 protein is inserted;
- (p) a cell or tissue extract; and
- (q) a heparin-binding fraction of a cell or tissue extract;

wherein the composition is to be administered to a tissue other than a tissue in need of
20 regeneration.

14. The composition of claim 13, which is to be administered parenterally.

15. The composition of claim 14, which is to be administered by injection.

25 16. The composition of claim 13, which is to be administered intravascularly, intramuscularly, subcutaneously, intradermally, or intraperitoneally.

17. The composition of any one of claims 13 to 16, wherein the method for promoting tissue
30 regeneration is a method for promoting the regeneration of a nerve, bone, or skin tissue.

CLAIMS

1. Use of a composition comprising any one of:

(a) an S100A8 protein;

5 (b) a cell that secretes an S100A8 protein;

(c) a vector into which a DNA encoding an S100A8 protein is inserted;

(d) an S100A9 protein;

(e) a cell that secretes an S100A9 protein;

(f) a vector into which a DNA encoding an S100A9 protein is inserted;

10 (g) a cell or tissue extract, wherein the cell or tissue extract is produced by a method comprising the step of immersing a cell or tissue in a solvent; and

(h) a heparin-binding fraction of a cell or tissue extract, wherein the heparin-binding fraction of the cell or tissue extract is produced by a method comprising the steps of:

15 (a) immersing a cell or tissue in a solvent;

(b) contacting immobilized heparin with the extract prepared in step (a); and

(c) eluting a heparin-binding fraction from the immobilized heparin;

in the manufacture of an agent for regenerating tissue, wherein the agent is to be administered to a tissue other than a tissue in need of regeneration.

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2. The use of claim 1, wherein the agent is to be administered parenterally.

3. The use of claim 2, wherein the administration is injection.

25 4. The use of claim 1, wherein the agent is to be administered intravascularly, intramuscularly, subcutaneously, intradermally, or intraperitoneally.

5. The use of any one of claims 1 to 4, wherein the agent is an agent for promoting the regeneration of a nerve, bone, or skin tissue.

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