Claims

1. A composition for stimulating a umbilical cord blood mesenchymal stem cell (UCB-MSC) to differentiate into a chondrocyte, the composition including thrombospondin-2 (TSP-2) or a UCB-MSC; and a pharmaceutically acceptable carrier,

wherein the UCB-MSC is an UCB-MSC expressing TSP-2 to an amount higher than 72 pg/ml/1.0x10^5 cells when monolayer cultured in a maintenance medium for 1 day, or an UCB-MSC expressing TSP-2 to an amount higher than 550 pg/ml/1.0x10^5 cells when pellet cultured in a maintenance medium.

2. The composition of claim 1, for use in treating or preventing at least one selected from the group consisting of a cartilage injury, cartilage degeneration, cartilage loss, a cartilage defect, and combinations thereof.

3. The composition of claim 1, wherein the composition is for use in treating or preventing arthritis.

4. Use of the composition of claim 1 in the preparation of a medicament for treating or preventing at least one selected from the group consisting of a cartilage injury, cartilage degeneration, cartilage loss, a cartilage defect, and combinations thereof.

5. Use of the composition of claim 1 in the preparation of a medicament for treating or preventing arthritis.

Claims

1. A composition for stimulating a UCB-MSC to differentiate into a chondrocyte, the composition including thrombospondin-2 (TSP-2) or a UCB-MSC expressing TSP-2; and a pharmaceutically acceptable carrier.

2. The composition of claim 1, for use in treating or preventing at least one selected from the group consisting of a cartilage injury, cartilage degeneration, cartilage loss, a cartilage defect, and combinations thereof.

3. The composition of claim 1, wherein the composition is for use in treating or preventing arthritis.

4. The composition of claim 1, wherein the cell expressing TSP-2 is an UCB-MSC expressing TSP-2 to an amount higher than 72 pg/ml/1.0x10^5 cells when monolayer cultured in a maintenance medium for 1 day, or an UCB-MSC expressing TSP-2 to an amount higher than 550 pg/ml/1.0x10^5 cells when pellet cultured in a maintenance medium.

5. Use of the composition of claim 1 for the preparation of a medicament for treating or preventing at least one selected from the group consisting of a cartilage injury, cartilage degeneration, cartilage loss, a cartilage defect, and combinations thereof.

6. Use of the composition of claim 1 for the preparation of a medicament for treating or preventing arthritis.