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 thrombospondin-2 (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.