Supplemental Fig. 1B

Saf O  ECM  IPN (SMS)  SMS bottom

LhCG+  

dLhCG+
Supplemental Fig. 1C

Col I IHC  ECM  IPN (SMS)  SMS bottom

LhCG+

dLhCG+
Supplemental Figure 1.

*In vitro* histology of LhCG+ and dLhCG+ A) with hematoxylin and eosin, B) Safranin O and C) immuno-histochemical staining using primary antibody of Type I collagen. The positive staining of hematoxylin stains nucleus into a purple colour. The positive staining of eosin stains extracellular matrix into pink colour. The positive staining of safranin O stains the glycosaminoglycan into a red colour. The positive immunohistochemical staining of Type I collagen emits green fluorescence. The positive staining of 4′,6-diamidino-2-phenylindole emits blue fluorescence.
Supplemental Figure 2

A. Wakitani

B. HHGS
Supplemental Figure 2.

The histological scores are based on both Histological Histochemical Grading System (HHGS) and Wakitani scoring system. A low score (min. 0; max. 14) defines a native-like cartilage tissue with full thickness defect filling and good integration with adjacent host cartilage. (*) indicates statistical significance (p < 0.05); ** indicates p ≤ 0.01, *** indicates p ≤ 0.001.
Supplemental Figure 3

A. dLhCG+

B. LhCG+

C. Untreated

Day 50

Day 100
Supplemental Figure 3.

Macroscopic observation of osteochondral repair by engraftment of full-scaled osteochondral implants: LhCG+ and dLhCG+ in comparison to “Untreated” defect which did not receive any engraftment, at the two testing time points. Testing time points are on Day 50 and Day 100, respectively. Scale bar: 1mm.