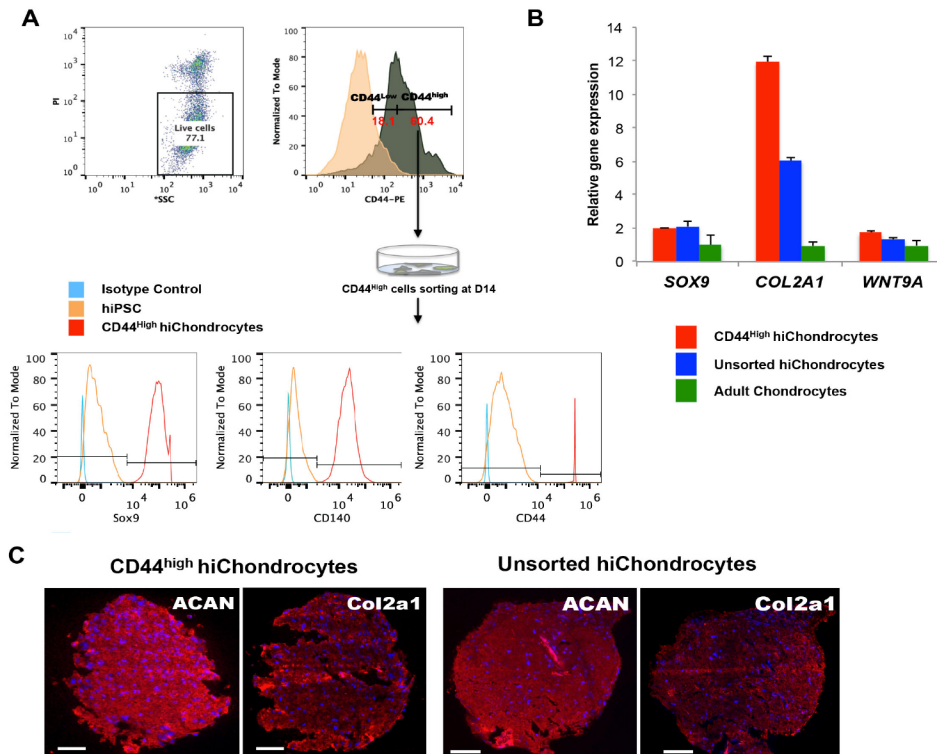


B Sox9 positive population during chondrocyte differentiation (%)

	hiPSC	Day 4	Day 7	Day 14	hiChondrocytes (p1)
Differentiation #1	0.00	81.60	73.10	76.50	99.20
Differentiation #3	0.00	85.30	77.20	80.50	99.40
Differentiation #4	0.00	64.20	64.40	80.30	97.50
Differentiation #7	0.00	76.30	65.40	85.30	92.60
Differentiation #10	0.00	67.20	59.30	89.60	96.00
Average	0.00	74.92	67.88	82.44	96.94
Standard deviation	0.00	9.07	7.18	5.08	2.79

Supplemental Figure S6. (A) Single cell FACS analyses for Sox9-expressing cell populations during chondrogenic differentiation of hiPSC, (B) Assessment of Sox9-positive population (%) during chondrocyte differentiation for different batches of hiPSC to ascertain the reproducibility of the differentiation protocol. Differentiation #1, #3 and #4 are from lentiviral-induced hiPSC and #7 and #10 are from retroviral-induced hiPSCs.



Supplemental Figure S7. (A) FACS sorting (at Day 14 of differentiation), expansion and characterization of CD44^{high} hiPSC-derived chondrocytes (CD44^{high} hiChondrocytes) after 14 days post sorting. (B) Quantitative gene expression for Sox9, Col2a1 and Wnt9a and (C) Immunofluorescence staining for Aggrecan and Col II expression after *in vitro* cartilage tissue formation from CD44^{high} hiChondrocytes and unsorted hiChondrocytes.