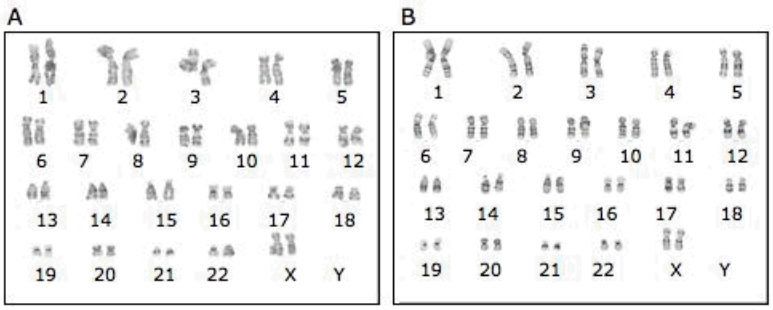
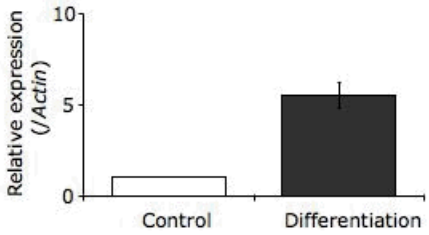


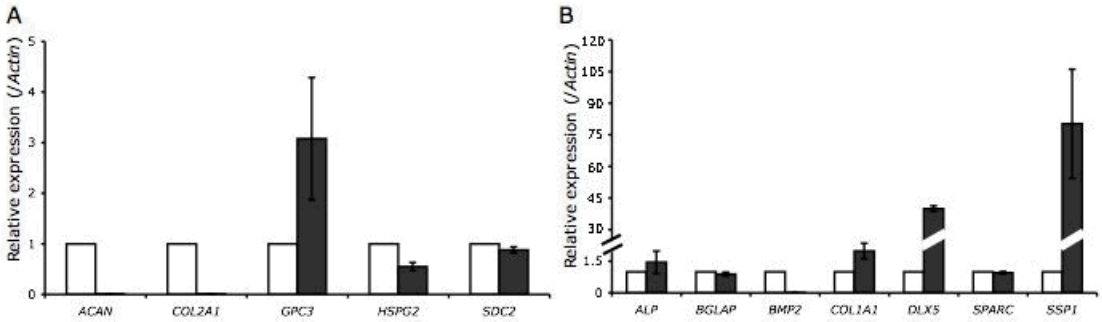
S-Fig 1. Karyotype analysis of human iPS cells and derivative mesenchymal stem cells (MSC). Cytogenetic analysis performed on twenty G-banded metaphase cells from human iPS cells cultured in a clinical compliant system at passage 10 (**A**) and hiPS cell-derived MSCs at passage 12 (**B**), demonstrated an apparently normal female karyotype.

1



S-Fig 2. *In vitro* differentiation of hiPS cell-derived mesenchymal stem cells (MSC) into adipogenic cells. Adipogenic induction was detected by up-regulation of *peroxisome proliferator activated receptor gamma* (*PPAR-γ*). Samples were analyzed by qRT-PCR, data normalized to human β-*Actin* expression and results shown are the mean and SEM of three experiments.

2



S-Fig 3. Expression of chondrogenic and osteogenic related genes in *in vitro*-differentiated human iPS-MSCs. Q-RT PCR was used to analyzed the expression of genes-related to chondrogenic differentiation of human iPS-MSCs directed towards osteogenic differentiation (**A**), and osteogenic-related genes in cells induced to chondrogesis (**B**). White columns show the control group: human iPS-MSCs cultured in growth-medium, while dark columns indicate cells induced to chondrogenic (**A**) and osteogenic (**B**) differentiation. *Aggrecan* (*ACAN*), *collagen type II alpha-1* (*COL2A1*), *perlecan* (*HSPG2*), *glypican 3 (GPC3), syndecan 2 (SCD2), bone morphogenetic protein 2* (*BMP2*), *collagen type I alpha-1* (*COL1A1*), *osteocalcin (BGLAP), alkaline phosphatase (ALP), bone sialoprotein 1 (SPP1), osteonectin (SPARC)* and *distal-less homeobox 5 (DLX5).* Data was normalized to human β-*Actin* expression and results shown are the mean and SEM of three experiments.