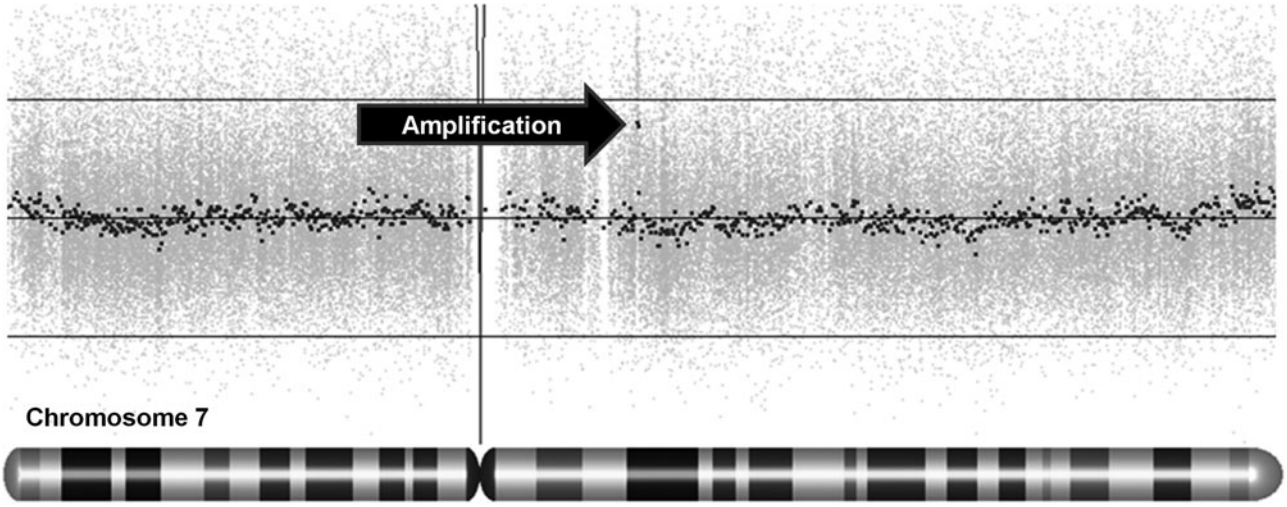
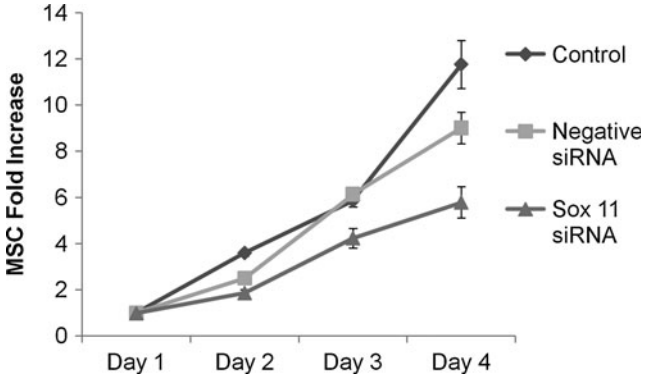
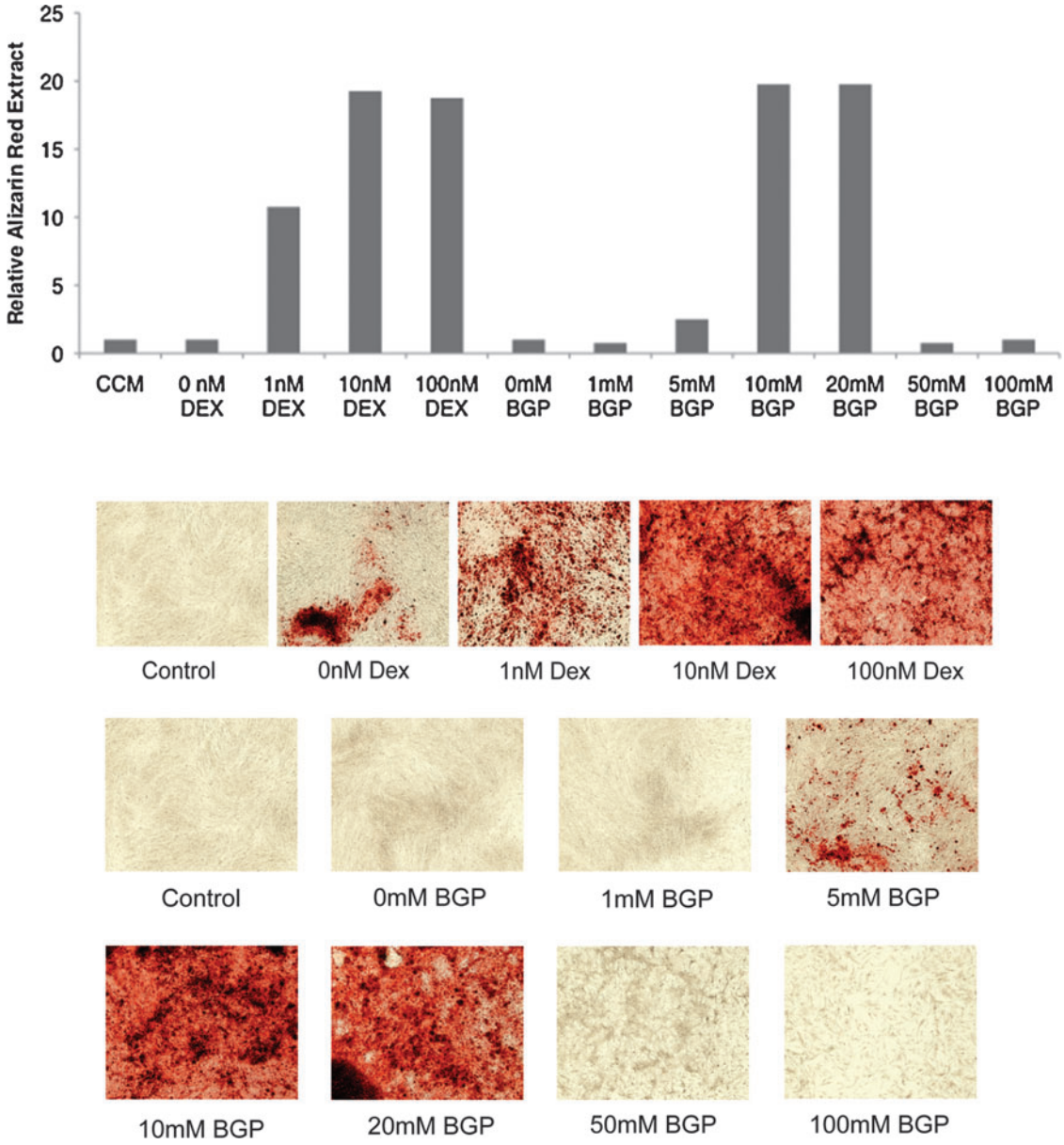


SUPPLEMENTAL FIG. S1. Scheme of comparative genomic hybridization region of amplification. MSCs from donors 281Lp2 and 260Rp2 were plated at 100 cells/cm^2 and replated at day 7 through 15 passages with medium changed on days 3 and 6. Samples from both donors showed no significant amplifications, deletions, or loss of heterozygousity at passage 8. Donor 281L showed a significant amplification of 400 kb on chromosome 7, but no deletions or loss of heterozygousity. MSCs, mesenchymal stem cells.



SUPPLEMENTAL FIG. S2. *Sox11* knockdown decreases proliferation of MSCs at higher density. *Sox11* expression relative quantity was measured by real-time reverse transcriptase-polymerase chain reaction in MSCs tranfected with siRNA for *Sox11* or negative control, scrambled sequences. MSCs from donor 7027Lp2 were plated at 100 cells/cm^2 and transfected 4 days later when the cells were ~50% confluent. MSC proliferation was negatively affected after 2–3 days of culture (mean ± 95% confidence interval for triplicate assays).



SUPPLEMENTAL FIG. S3. BGP and DEX dosage optimization during osteogenesis. MSCs from donor 7068Lp2 were plated at 100 cells/cm^2 and cultured until 70% confluence at day 7 when the complete culture medium (control) or osteogenic medium was added with varying concentrations of BGP with DEX at 10 nM and varying concentrations of DEX with BGP at 10 mM. Relative Alizarin Red was measured when mineralized monolayers began to detach at 11 days after differentiation. BGP, beta-glycerol phosphate; DEX, dexamethasone.

Supplemental Table S1. Data from Real-Time Reverse Transcriptase-Polymerase Chain Reaction Assays for Expression of 19 Genes for Pathways Known to be Involved in Signaling of DNA Damage

Gene	*P6 versus P2-fold change*	*P12 versus P2-fold change*
ABL1	NS	−1.49
ATM	NS	−1.29
ATR	NS	−1.32
CHEK2	NS	−1.32
CIDEA	1.61	NS
DDB1	1.21	NS
FEN1	1.62	NS
LIG1	NS	−1.73
MBD4	NS	−1.61
N4BP2	NS	−2.46
NBN	NS	−1.52
OGG1	NS	1.09
RAD50	1.26	NS
RPA1	1.34	NS
SEMA4A	NS	−2.15
SMC1A	1.37	NS
SUMO1	NS	−1.24
XPA	NS	−1.62
XRCC2	NS	1.69

Significant changes in expression of DNA damage signaling pathway genes (*t*-test, $p < 0.05$). NS denotes fold changes that were not significant.

Supplemental Table S2. Microarray Data for Transcripts with Largest Changes in Signal Intensities Between Day 2 and 7 with Expansion of the Cells

	Day 2 versus 7			
Gene	*P2*	*P5*	*P10*	*P15*
Endothelial cell-specific molecule 1	26.8	12.6	45.5	16.1
Podocalyxin-like	21.1	5.6	10.5	4.2
Chorionic gonadotropin	18.9	8.9	5.4	8.0
Retinoic acid receptor, beta	15.4	2.0	−1.1	−1.2
Claudin 4	14.6	5.6	8.3	−1.6
Placental growth factor	8.6	5.3	17.6	12.5
Laminin, gamma 2	7.5	13.7	15.0	14.6
SMAD, mothers against DPP homolog 1	7.0	−1.2	−1.3	−1.2
Integrin, alpha 6	6.6	3.0	4.4	3.1
Annexin A8	6.5	10.8	1.3	5.0
Syndecan 1	6.0	3.0	4.5	4.4
Matrix metallopeptidase 1	5.9	−1.2	1.6	3.5
	Day 2 versus 7			
Gene	*P2*	*P5*	*P10*	*P15*
Synaptopodin 2	−118.7	−11.5	−8.8	−7.1
5-Hydroxytryptamine (serotonin) receptor 1E	−31.2	−1.6	−1.5	1.3
Aggrecan 1	−29.5	−3.4	−3.7	−2.6
Integrin, alpha 7	−25.3	−7.9	−5.8	−8.2
Cytochrome P450	−22.6	−26.1	−44.3	−45.6
Gelsolin	−20.7	−8.0	−5.5	−5.2
Thrombospondin 2	−19.6	−3.1	−3.4	−1.0
Glypican 6	−18.6	−1.7	1.6	1.3
Fibroblast growth factor 7	−16.2	−5.0	−2.1	1.1
Signal transducer and activator of transcription 4	−15.6	−9.8	−6.0	−8.6
Collagen, type XI, alpha 1	−15.1	−1.5	1.2	−1.8
Hyaluronan synthase 3	−14.9	−3.5	−5.1	−3.9
Collagen, type XII, alpha 1	−14.9	−2.6	−2.7	−2.1
Synaptopodin 2	−14.5	−3.8	−6.0	−3.4
Collagen, type VI, alpha 1	−14.3	−1.9	−1.9	−1.4
Decorin	−12.3	−3.3	−1.1	−2.6
Vascular cell adhesion molecule 1	−11.5	−2.8	−1.4	−1.6
Early growth response 1	−10.2	−1.9	−2.0	−2.8