

**Supplementary table:**

**Supplementary table 1: All genes screened by osteogenic PCRArray.** The gene name and abbreviation is given, p-value and fold up- or down-regulation.

**Supplementary table 1:**

<b>Gene name</b>	<b>Gene name (abbreviation)</b>	<b>T-test p-value</b>	<b>Fold up- or down-regulation</b>
Activin A receptor, type 1	Acvr1	0.236910	-1,35
Alpha-2-HS-glycoprotein	Ahsg	0.591086	1,26
Alkaline phosphatase, liver/bone/kidney	Alpl	<b>0.006653</b>	<b>-4,65</b>
Annexin A5	Anxa5	<b>0.000772</b>	<b>-1,46</b>
Bone gamma carboxyglutamate protein	Bglap	0.186587	-2,98
Biglycan	Bgn	<b>0.002045</b>	-1,32
Bone morphogenetic protein 1	Bmp1	<b>0.000425</b>	<b>-1,66</b>
Bone morphogenetic protein 2	Bmp2	<b>0.001006</b>	<b>-1,46</b>
Bone morphogenetic protein 3	Bmp3	<b>0.014371</b>	<b>-4,44</b>
Bone morphogenetic protein 4	Bmp4	<b>0.001720</b>	<b>-1,80</b>
Bone morphogenetic protein 5	Bmp5	<b>0.000457</b>	<b>-3,24</b>
Bone morphogenetic protein 6	Bmp6	<b>0.000020</b>	<b>-4,37</b>
Bone morphogenetic protein 7	Bmp7	<b>0.033857</b>	1,34
Bone morphogenetic protein receptor, type 1A	Bmpr1a	<b>0.000071</b>	<b>-1,72</b>
Bone morphogenetic protein receptor, type 1B	Bmpr1b	<b>0.005932</b>	<b>-2,33</b>
Bone morphogenetic protein receptor, type II (serine/threonine kinase)	Bmpr2	<b>0.007525</b>	<b>-1,65</b>
CD36 antigen	Cd36	<b>0.020480</b>	<b>-448,75</b>
Cadherin 11	Cdh11	<b>0.001222</b>	<b>-1,77</b>
Chordin	Chrd	<b>0.000044</b>	<b>-1,53</b>
Collagen, type X, alpha 1	Col10a1	<b>0.003539</b>	<b>-3,60</b>
Collagen, type XIV, alpha 1	Col14a1	<b>0.002100</b>	<b>-8,57</b>
Collagen, type I, alpha 1	Col1a1	<b>0.019354</b>	-1,35
Collagen, type I, alpha 2	Col1a2	<b>0.002378</b>	<b>-1,64</b>
Collagen, type II, alpha 1	Col2a1	<b>0.000011</b>	<b>-8,21</b>
Collagen, type III, alpha 1	Col3a1	<b>0.000392</b>	<b>-1,47</b>
Collagen, type IV, alpha 1	Col4a1	0.133077	1,10
Collagen, type V, alpha 1	Col5a1	<b>0.005515</b>	<b>-1,47</b>
Cartilage oligomeric matrix protein	Comp	<b>0.000355</b>	<b>-3,87</b>
Colony stimulating factor 1 (macrophage)	Csf1	0.785532	1,02
Colony stimulating factor 2 (granulocyte-macrophage)	Csf2	0.184865	13,79
Colony stimulating factor 3 (granulocyte)	Csf3	0.334985	-1,57
Cathepsin K	Ctsk	<b>0.000014</b>	<b>-3,24</b>
Distal-less homeobox 5	Dlx5	<b>0.000401</b>	<b>-3,18</b>
Epidermal growth factor	Egf	<b>0.002158</b>	<b>-2,77</b>
Fibroblast growth factor 1	Fgf1	0.783050	1,12

Fibroblast growth factor 2	Fgf2	0.589767	1,04
Fibroblast growth factor receptor 1	Fgfr1	<b>0.001155</b>	<b>-1,48</b>
Fibroblast growth factor receptor 2	Fgfr2	<b>0.000058</b>	<b>-3,91</b>
FMS-like tyrosine kinase 1	Flt1	0.203079	1,37
Fibronectin 1	Fn1	0.578258	-1,11
Growth differentiation factor 10	Gdf10	0.194805	-1,31
GLI-Kruppel family member GLI1	Gli1	<b>0.005353</b>	<b>-9,42</b>
Intercellular adhesion molecule 1	Icam1	<b>0.001208</b>	<b>-1,45</b>
Insulin-like growth factor 1	Igf1	<b>0.001169</b>	<b>-2,28</b>
Insulin-like growth factor I receptor	Igf1r	0.451985	-1,08
Indian hedgehog	Ihh	0.078081	-1,61
Integrin alpha 2	Itga2	<b>0.008979</b>	<b>-2,85</b>
Integrin alpha 2b	Itga2b	0.060453	-1,22
Integrin alpha 3	Itga3	0.296137	1,13
Integrin alpha M	Itgam	<b>0.027496</b>	<b>-14,43</b>
Integrin alpha V	Itgav	0.196625	-1,15
Integrin beta 1 (fibronectin receptor beta)	Itgb1	<b>0.006666</b>	-1,32
Matrix metalloproteinase 10	Mmp10	<b>0.012145</b>	<b>7,60</b>
Matrix metalloproteinase 2	Mmp2	0.069059	-1,15
Matrix metalloproteinase 8	Mmp8	N/A	-1,49
Matrix metalloproteinase 9	Mmp9	<b>0.003412</b>	<b>-26,49</b>
Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105	Nfkb1	<b>0.006557</b>	<b>-1,48</b>
Noggin	Nog	<b>0.001018</b>	<b>-3,17</b>
Platelet derived growth factor, alpha	Pdgfa	<b>0.027152</b>	-1,22
Phosphate regulating gene with homologies to endopeptidases on the X chromosome (hypophosphatemia, vitamin D resistant rickets)	Phex	<b>0.010368</b>	<b>-2,84</b>
Runt related transcription factor 2	Runx2	<b>0.019048</b>	<b>-1,79</b>
Serine (or cysteine) peptidase inhibitor, clade H, member 1	Serpinh1	<b>0.000148</b>	<b>-1,51</b>
MAD homolog 1 (Drosophila)	Smad1	0.210624	-1,07
MAD homolog 2 (Drosophila)	Smad2	<b>0.002953</b>	<b>-1,63</b>
MAD homolog 3 (Drosophila)	Smad3	<b>0.000181</b>	<b>-1,54</b>
MAD homolog 4 (Drosophila)	Smad4	<b>0.000203</b>	<b>-1,71</b>
MAD homolog 5 (Drosophila)	Smad5	<b>0.001752</b>	<b>-1,65</b>
Sclerostin	Sost	<b>0.017730</b>	<b>-6,94</b>
SRY-box containing gene 9	Sox9	<b>0.001301</b>	<b>-2,38</b>
Sp7 transcription factor 7	Sp7	<b>0.028665</b>	<b>-3,83</b>
Secreted phosphoprotein 1	Spp1	<b>0.000062</b>	<b>5,02</b>
Transforming growth factor, beta 1	Tgfb1	0.857611	1,01
Transforming growth factor, beta 2	Tgfb2	<b>0.003229</b>	<b>-1,52</b>

Transforming growth factor, beta 3	Tgfb3	0.891894	-1,01
Transforming growth factor, beta receptor I	Tgfbr1	<b>0.018723</b>	-1,44
Transforming growth factor, beta receptor II	Tgfbr2	0.106082	-1,18
Transforming growth factor, beta receptor III	Tgfbr3	<b>0.004518</b>	<b>-1,51</b>
Tumor necrosis factor	Tnf	0.281726	-1,51
Tumor necrosis factor (ligand) superfamily, member 11	Tnfsf11	<b>0.026206</b>	<b>1,65</b>
Twist homolog 1 (Drosophila)	Twist1	<b>0.000990</b>	-1,19
Vascular cell adhesion molecule 1	Vcam1	<b>0.004041</b>	-1,42
Vitamin D receptor	Vdr	<b>0.042195</b>	-1,35
Vascular endothelial growth factor A	Vegfa	0.656663	-1,05
Vascular endothelial growth factor B	Vegfb	<b>0.001980</b>	-1,25