## **Supplementary Figures Legends**

Figure S1. Serum expression level of *GAS5* in OP patients with vertebral fractures (OP\_VF) and femoral fractures (OP\_FF). *GAS5* expression level in the serum of 29 OP\_VF was compared to 14 OP\_FF and 28 controls (CTR). *GAS5* expression level was normalized using *GAPDH* mRNA and relative expression values are expressed as 2-ΔCt. Individual data points represent the mean of duplicate assays for each sample. Statistical differences between groups were analysed using ANOVA with the Tukey's multiple comparison post-test analysis. \*\*\* represents a significant difference between OP\_VF and CTR (p<0.001) \*\*\* represents a significant difference between OP\_VF and OP\_FF (p<0.01).

Figure S2. Correlation analysis of GAS5 expression level and PTH concentration in OP patients serum. Level of GAS5 expression was positively associated with PTH concentration (pg/ml). Spearman's correlation analysis was performed. Spearman r = 0.2930; 95% confidence interval = 0.007441 to 0.5344. \*P < 0.05.

Figure S3. Correlation analysis of PTH and 25-(OH)-VitD concentrations in OP patients serum. Level of PTH (pg/ml) was negatively associated with PTH (pg/ml) concentration. Spearman's correlation analysis was performed. Spearman r = -0.3842; 95% confidence interval = -0.6040 to -0.1102. \*\*P < 0.01.

## **Supplementary Figures**

Figure S1

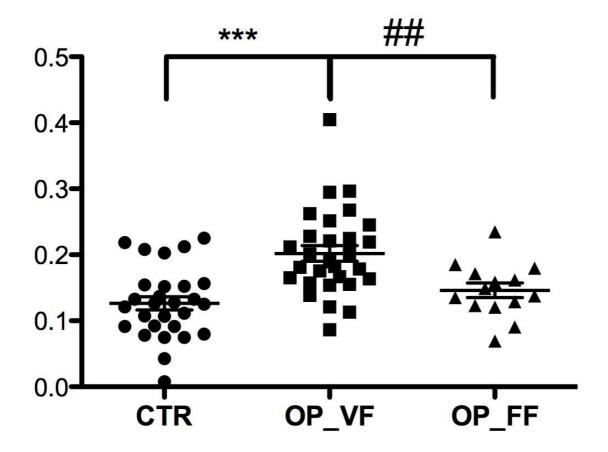


Figure S2

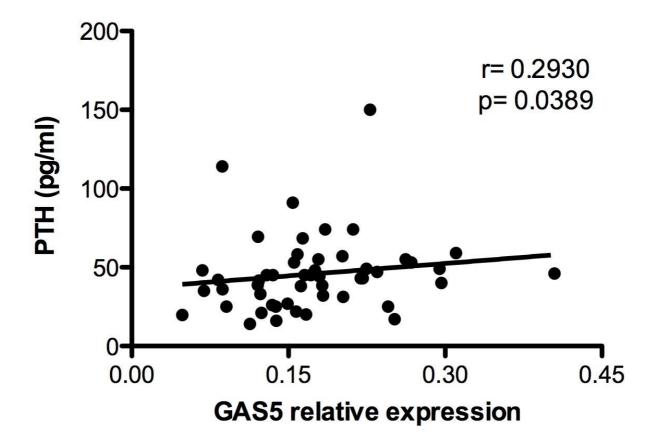


Figure S3

