Osteoblasts were activated by addition of 50 ng/ml TNF-α or 1 ng/ml PMA for 24 h and transcripts encoding MMP-1 (top) MMP-3 (bottom) were enumerated by real time quantitative RT-PCR in comparison to mock treated controls (A). The data show the mean values and standard errors of induction experiments using osteoblasts from three individuals separately. We present the target gene to GAPDH signal ratio (Y-axis, induction index over control) as function of the induction reagent (x-axis). In all
samples analysed, activation of osteoblasts resulted in enhanced steady state mRNA levels encoding MMP-1 or MMP-3 (A). In addition, the supernatants were harvested and concentrations of MMP-1 (top) or MMP-3 (bottom) were enumerated by ELISA in comparison to the controls (B). The figures represent the mean values and standard errors of two independent duplicate induction experiments using osteoblasts from three individuals separately. Dilutions of recombinant collagenases served as positive controls, complete medium as negative control. The scale (Y-axis) shows the MMP-1 or MMP-3 concentrations in ng/ml. In all samples analysed, activation of the cells by TNF-α or PMA resulted in enhanced MMP-1 and MMP-3 secretion (B).