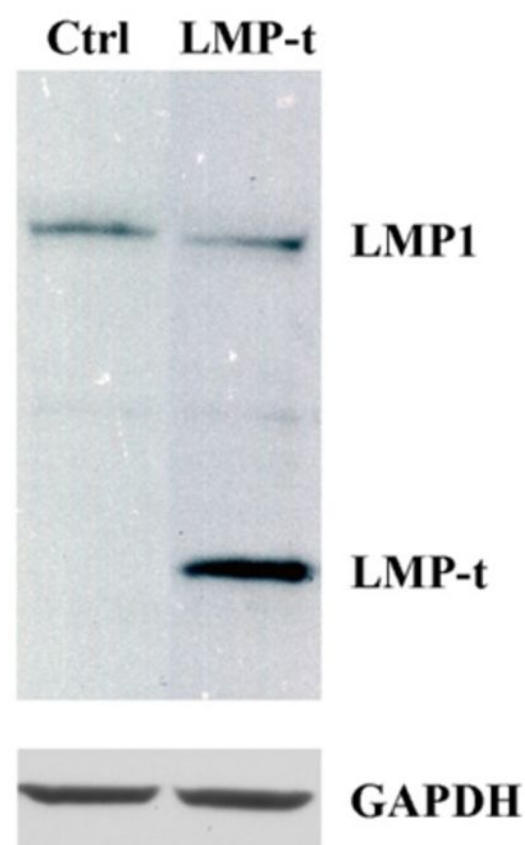


A

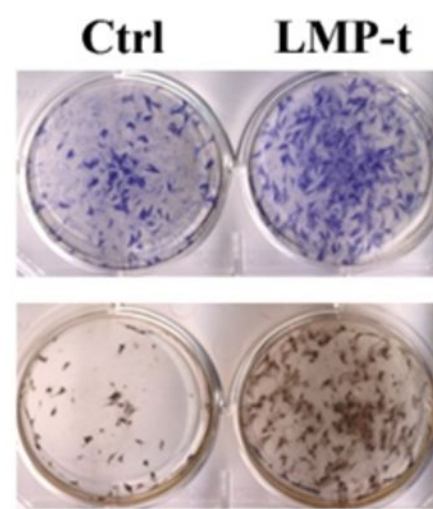
LMP3
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DGENAGSLTHIEAQNKIRACGERLSLGLSRAQPVQSKPQKASAPAADPPRYTFAP
SVSLNKTARPFGAPPPADSAPQQNG **CRPLTNSRSDRWSQMPASSG**

LMP-t
MDSFKVVLEGPAPWGFRLQGGKDFNVPLSISRLTPGGKAAQAGVAVGDWVLSI
DGENAGSLTHIEAQNKIRACGERLSLGLSRAQPVQSKPQKASAPAADPPRYTFAP
SVSLNKTARPFGAPPPADSAPQQNG **QPLRPLVPDAS**

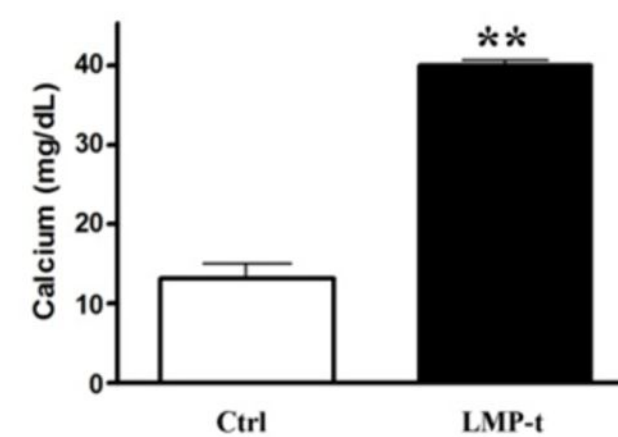
B



C



D



Supplementary Figure 2: Truncated LMP stimulates osteogenic differentiation *in vitro*. A truncated form of LMP (LMP-t), which differs from LMP3 only in the last 20 amino acid at C-terminus, was sub-cloned by PCR into a retrovirus vector. LMP-t was then stably overexpressed in PDL cells. (A) The difference in amino acids between LMP3 and LMP-t is highlighted. (B) Western blot was used to test the LMP-t expression in PDL cells. LMP1 is approximately 50 kDa and LMP-t is approximately 15 kDa. (C) PDL cells were induced to osteogenic differentiation and ALP staining was performed at day 14 (upper panel) and von Kossa staining was performed at day 24 (lower panel). (D) Extracellular calcium was also measured at day 24.