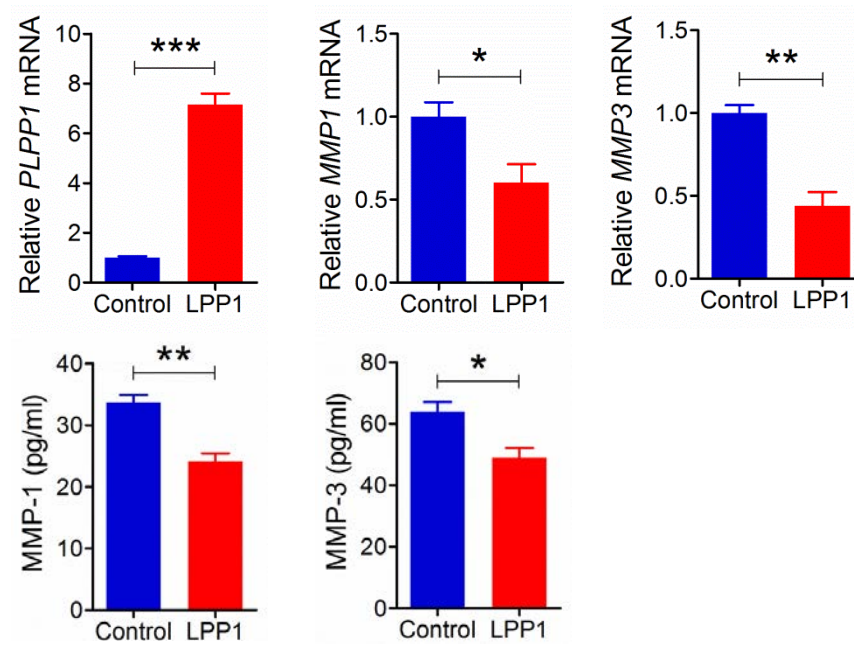
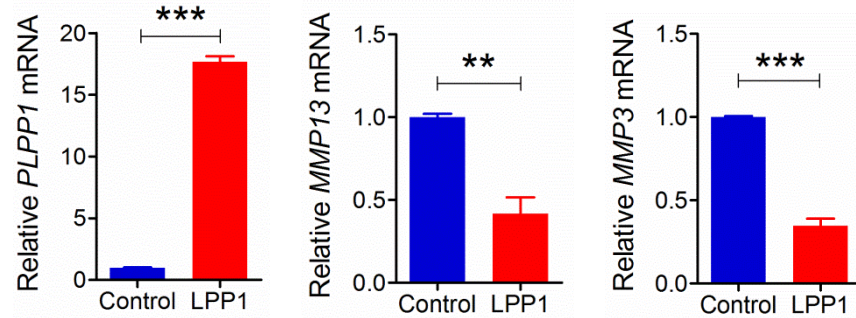


Supplementary Figure 1

A BT-549 cells

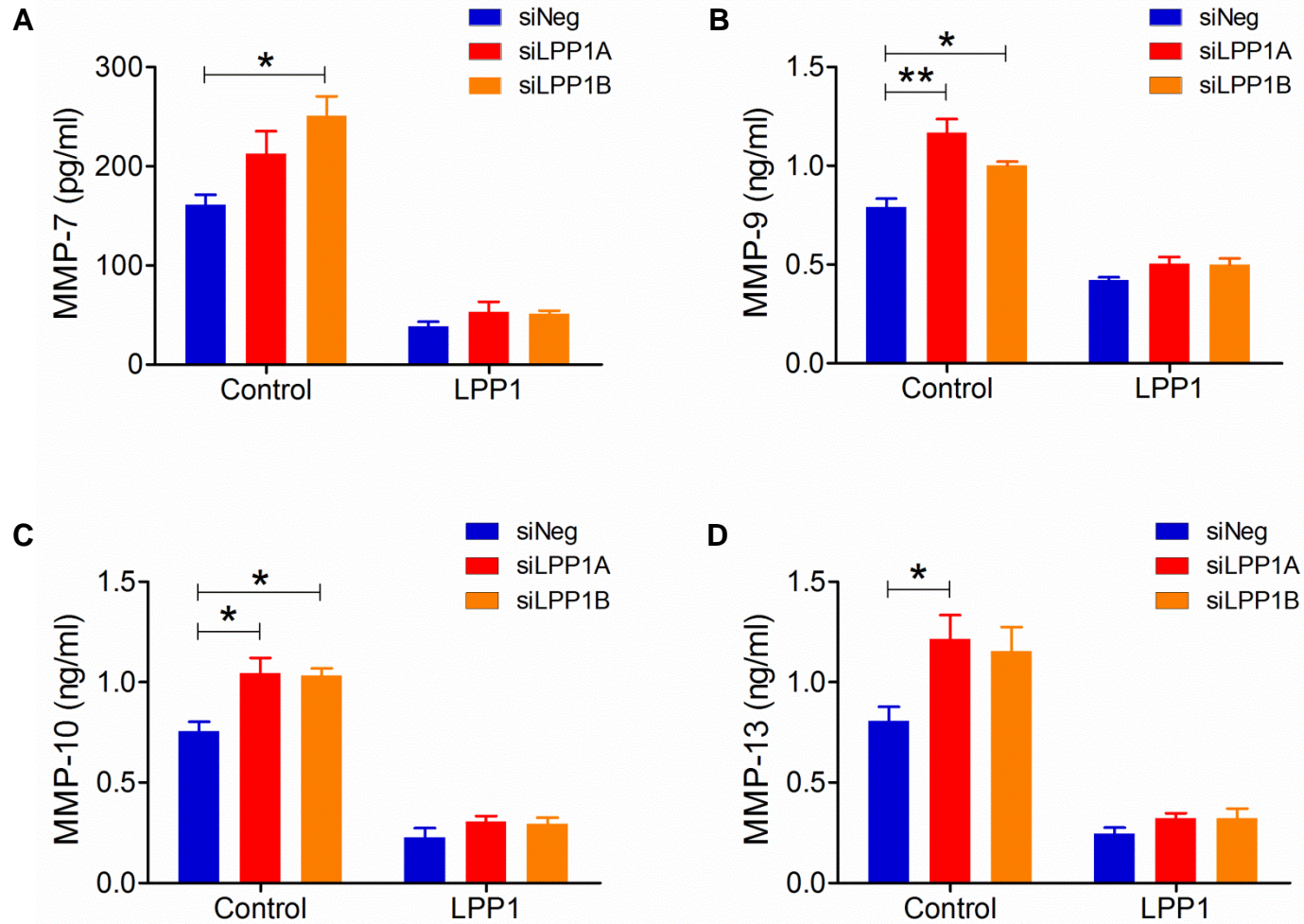


B 4T1 cells



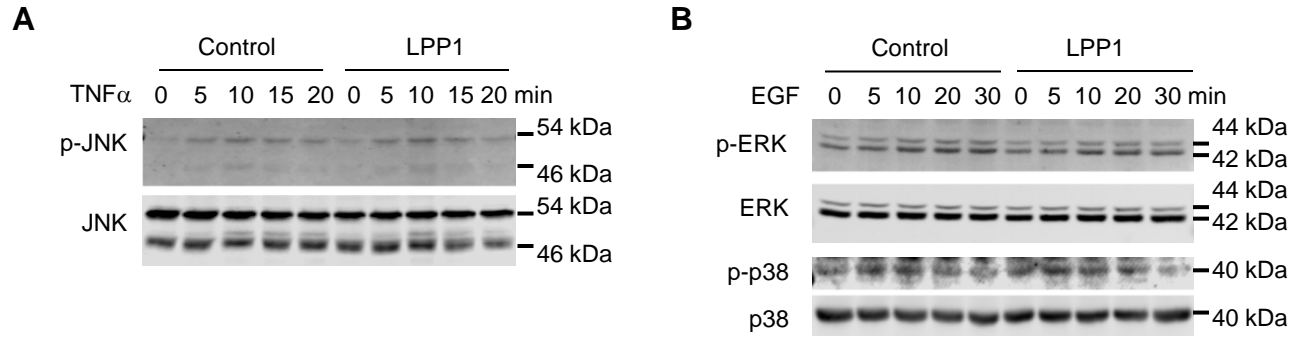
Supplementary Figure 1. A: Effects of increasing LPP1 (*PLPP1*) expression on mRNA and protein levels of MMP-1 and MMP-3 in BT-549 human breast cancer cells. **B:** Effects of increasing LPP1 (*PLPP1*) expression on mRNA levels of MMP-13 and MMP-3 in 4T1 mouse breast cancer cells. Results are means and SEM from three independent experiments and analyzed by Student's *t*-test. **P*<0.05, ***P*<0.01, ****P*<0.001.

Supplementary Figure 2



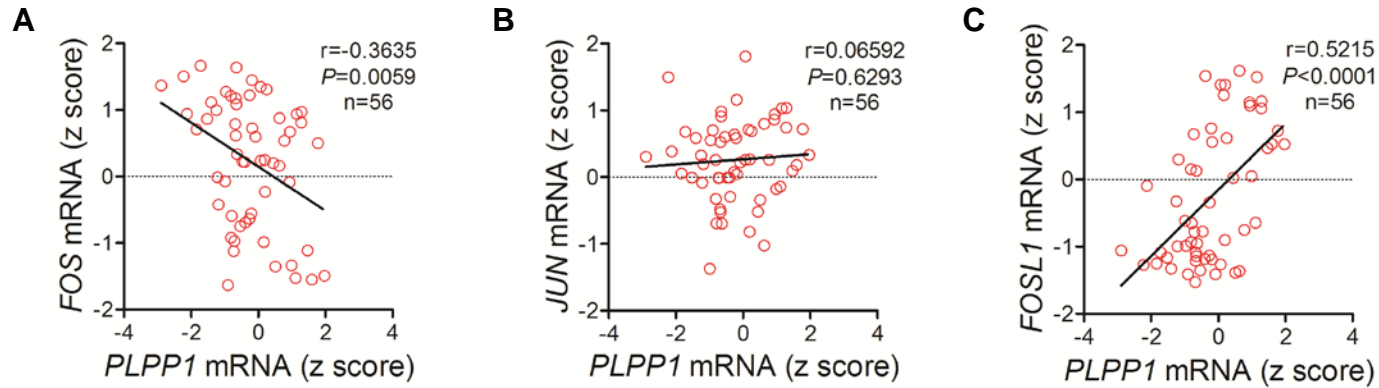
Supplementary Figure 2. Knockdown of LPP1 increased concentrations of MMP-7 (A), MMP-9 (B), MMP-10 (C) and MMP-13 (D) in the conditioned media from control MDA-MB-231 cells, but did not reverse the inhibition by LPP1 overexpression. Results are means and SEM and analyzed by ANOVA. $n=6$, $*P<0.05$, $**P<0.01$.

Supplementary Figure 3



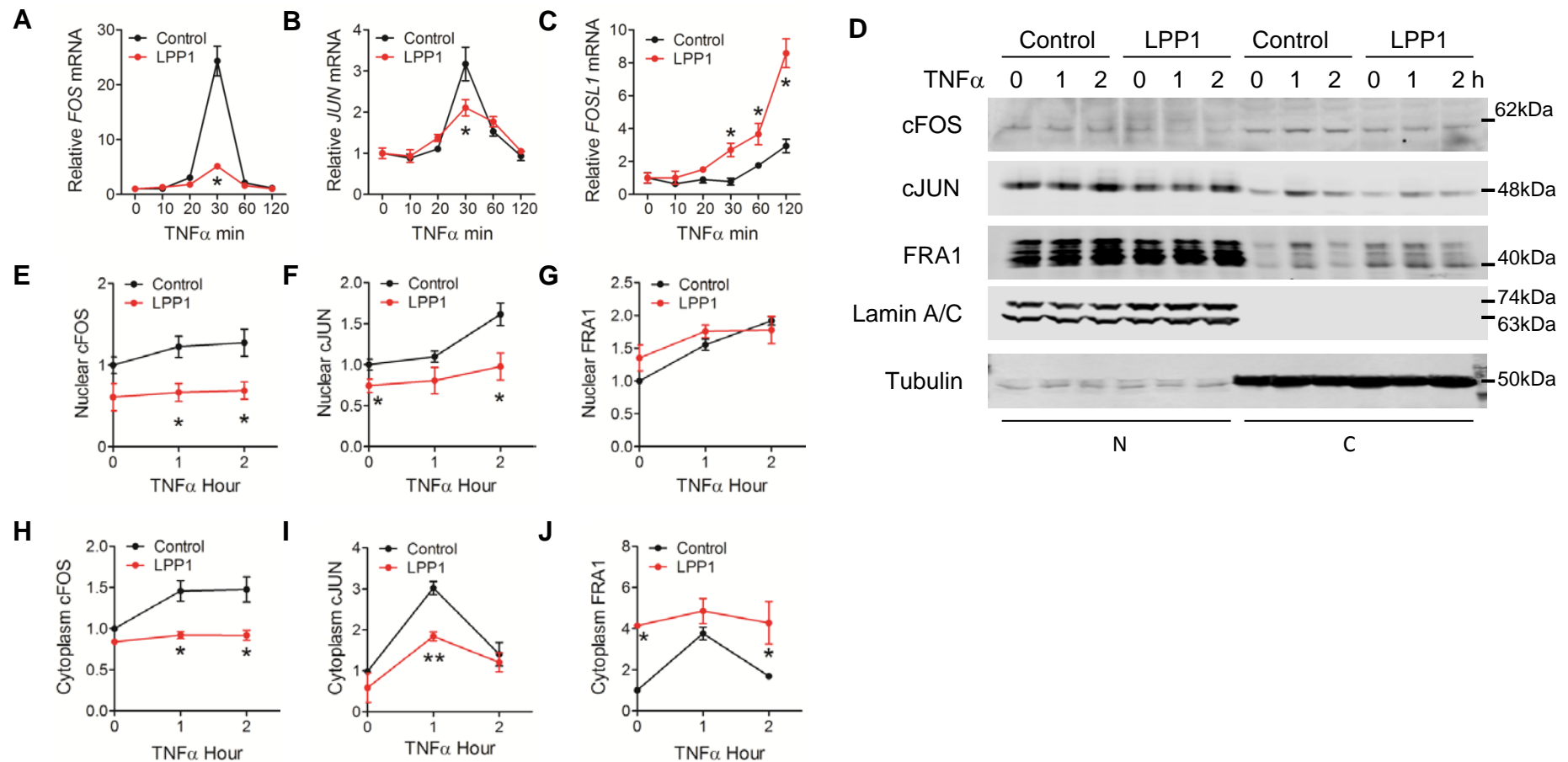
Supplementary Figure 3. A: Effects of TNF α (50ng/ml) on the JNK phosphorylation, and **B:** effects of EGF (100 ng/ml) on phosphorylation of ERK and p38 in MDA-MB-231 cells with or without increased expression of LPP1.

Supplementary Figure 4



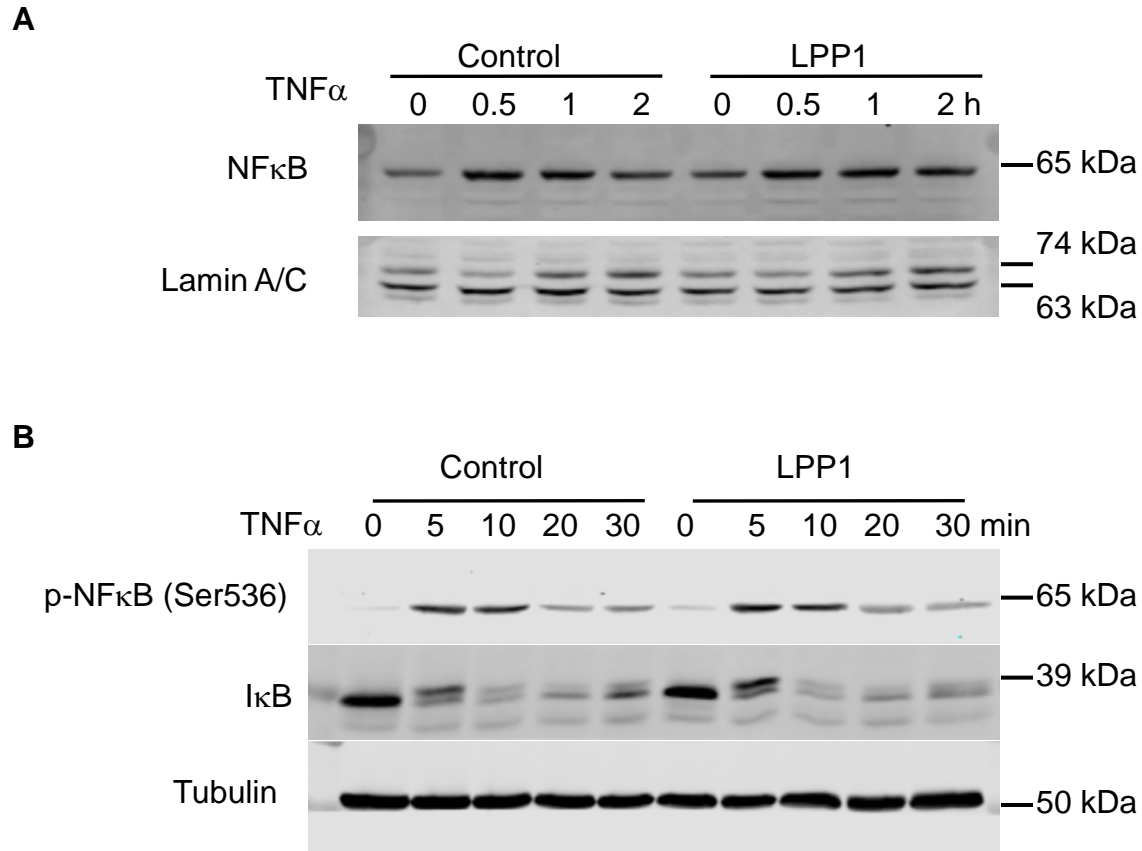
Supplementary Figure 4. **A:** Correlation between mRNA levels of LPP1 (*PLPP1*) and cFOS (*FOS*), and **B:** correlation between mRNA levels of LPP1 and cJUN (*JUN*), and **C:** correlation between mRNA levels of LPP1 and FRA1 (*FOSL1*) in 56 breast cancer cell lines. Data were obtained from Cancer Cell Line Encyclopedia of the Broad Institute and Novartis.

Supplementary Figure 5



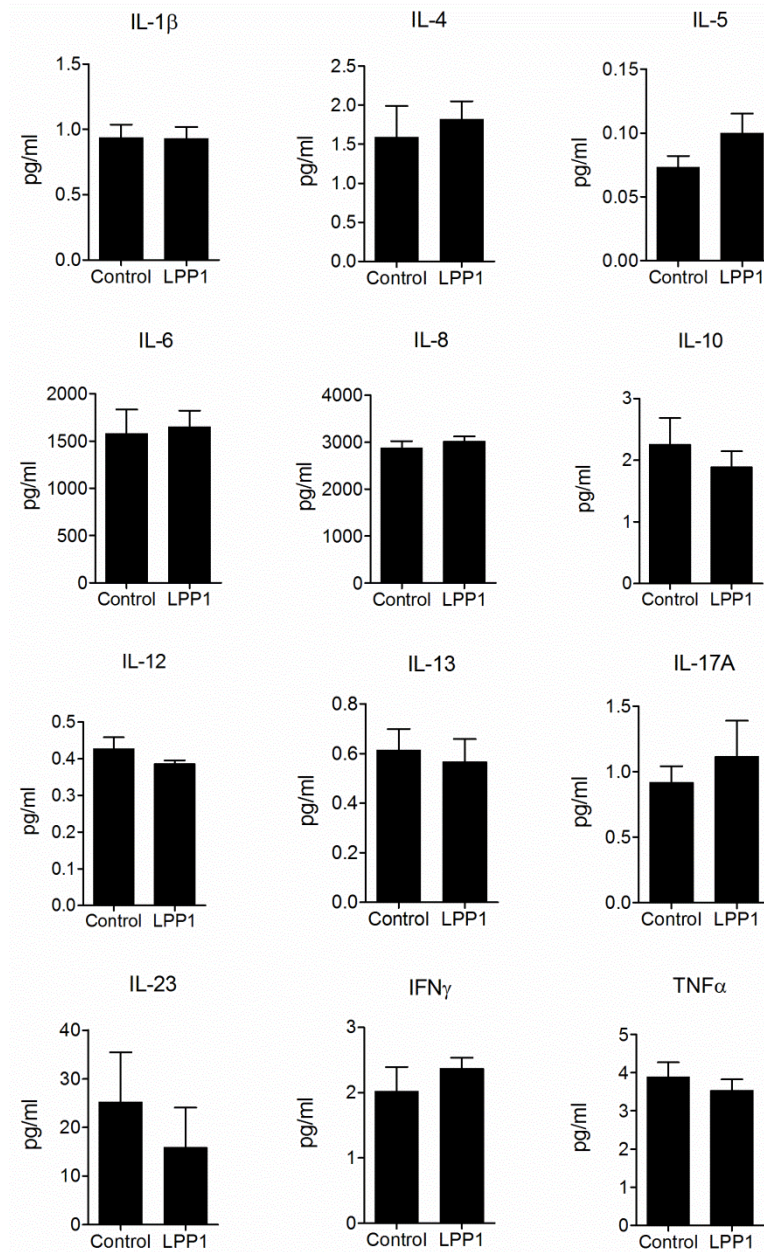
Supplementary Figure 5. A, B and C: Time course of cFOS (*FOS*), cJUN (*JUN*) and FRA1 (*FOSL1*) mRNA expressions induced by 50 ng/ml TNF α in MDA-MB-231 cell with or without increased LPP1. **D:** TNF α -induced expressions of cFOS, cJUN and FRA1 in cytoplasm (C) and nuclei (N) of MDA-MB-231 cells with or without increased LPP1. **E - J:** Quantification of the western blotting results. Results are means and SEM from three independent experiments, and analyzed by ANOVA. * $P < 0.05$, ** $P < 0.01$.

Supplementary Figure 6



Supplementary Figure 6. A: TNF α (50 ng/ml) induced increase of NF κ B in nuclei of control and LPP1 overexpressing MDA-MB-231 cells. **B:** TNF α (50 ng/ml) induced phosphorylation of NF κ B and degradation of I κ B in total cell lysates of control and LPP1 overexpressing MDA-MB-231 cells. Rabbit anti-NF κ B (#8242), rabbit anti-phospho-NF κ B (#3033) and mouse anti-I κ B (#4814) antibodies were from Cell Signaling Technology.

Supplementary Figure 7



Supplementary Figure 7: Cytokine concentrations in the conditioned media of MDA-MB-231 cells with or without increased LPP1 expression. Results are means and SEM from three independent experiments.