**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. 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.** 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. 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

A, B and C: Time course of cFOS (FOS), cJUN (JUN) and FRA1 (FOSL1) mRNA expressions induced by 50 ng/ml TNFα in MDA-MB-231 cell with or without increased LPP1. D: TNFα-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.** A: TNFα (50 ng/ml) induced increase of NFκB in nuclei of control and LPP1 overexpressing MDA-MB-231 cells. B: TNFα (50 ng/ml) induced phosphorylation of NFκB and degradation of IκB in total cell lysates of control and LPP1 overexpressing MDA-MB-231 cells. Rabbit anti-NFκB (#8242), rabbit anti-phospho-NFκB (#3033) and mouse anti-IκB (#4814) antibodies were from Cell Signaling Technology.
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.