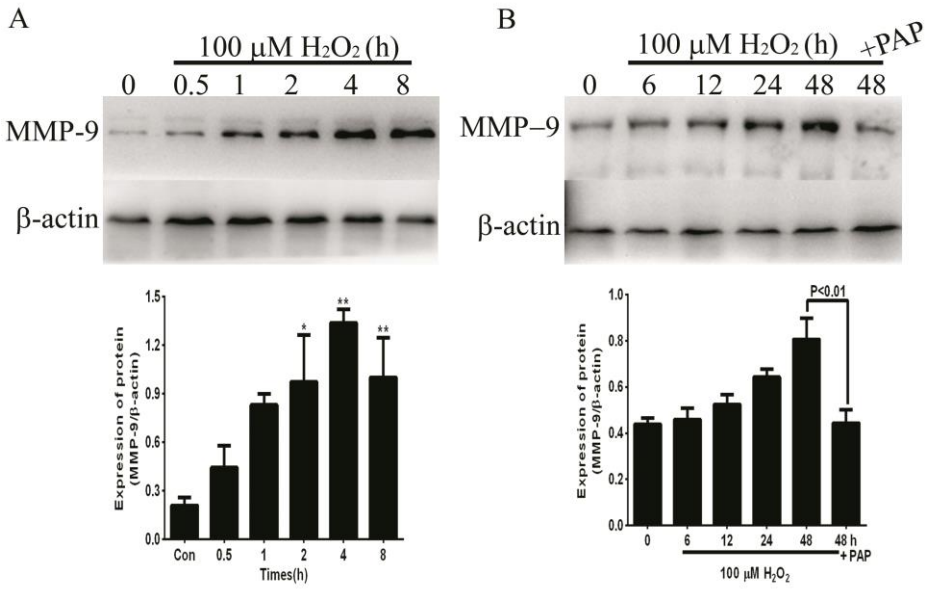

Figure S1 *Effect of H_2O_2 on MMP-9 activation* in NCI-H1650 cells. (A) H_2O_2 induced MMP-9 expression in a time-dependent manner. (B) Western blot analyses showed that 100 μM H_2O_2 induced MMP-9 secretion in a time-dependent manner, and pre-treatment of 400 μg/mL PAP decreased MMP-9 protein. **P*<0.05, ***P*<0.01 *vs.* Con.

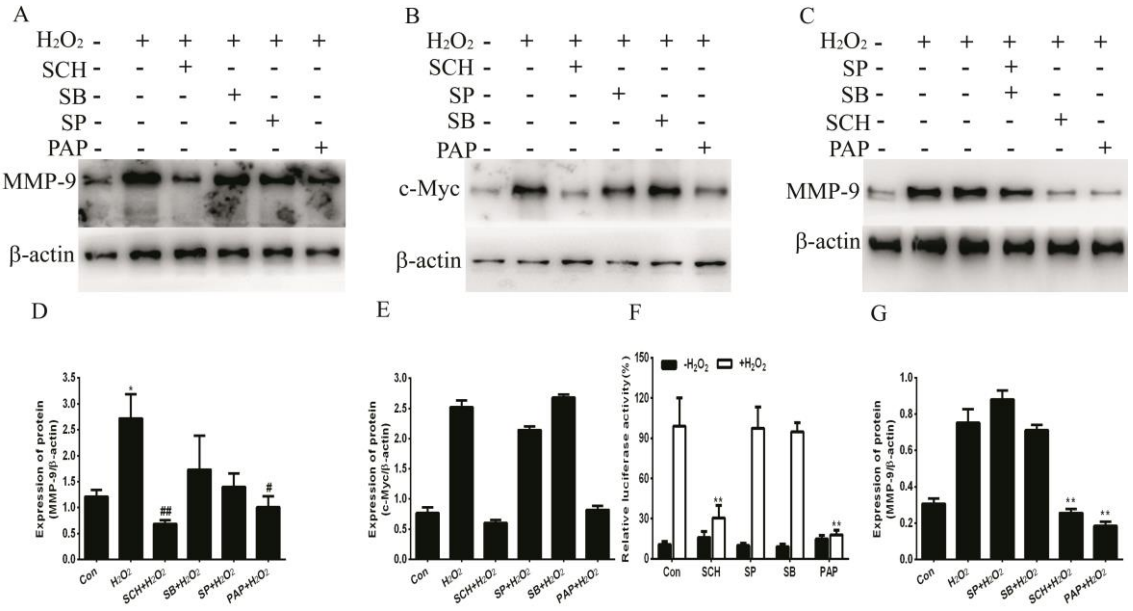

Figure S2 Regulation of MMP-9 transcriptions are dependent on ERK/c-Myc activities in NCI-H1650 cells. (A) H_2O_2-induced MMP-9 expression was associated with increased ERK signaling in NCI-H1650 cells. The results represent as mean ± SD, and **P*<0.05 *vs.* Con; #*P*<0.05, ##*P*<0.01, *vs.* H_2O_2 group. (B, E) ERK inhibitor SCH772984 and PAP effectively inhibited H2O2-induced c-Myc translocation. ***P*<0.01, *vs.* H_2O_2 group. (F) PAP suppressed H_2O_2-induced c-Myc transcriptional activity, the relative luciferase activities were normalized to pRL-TK Renilla luciferase. (C, G) Pre-treatment with PAP, SCH772984 prior to H_2O_2 significantly reduced

the expression of MMP-9. The results represent as mean ± SD, and $^{**}P<0.01$ *vs.* H_2O_2 group.