

Online supplement

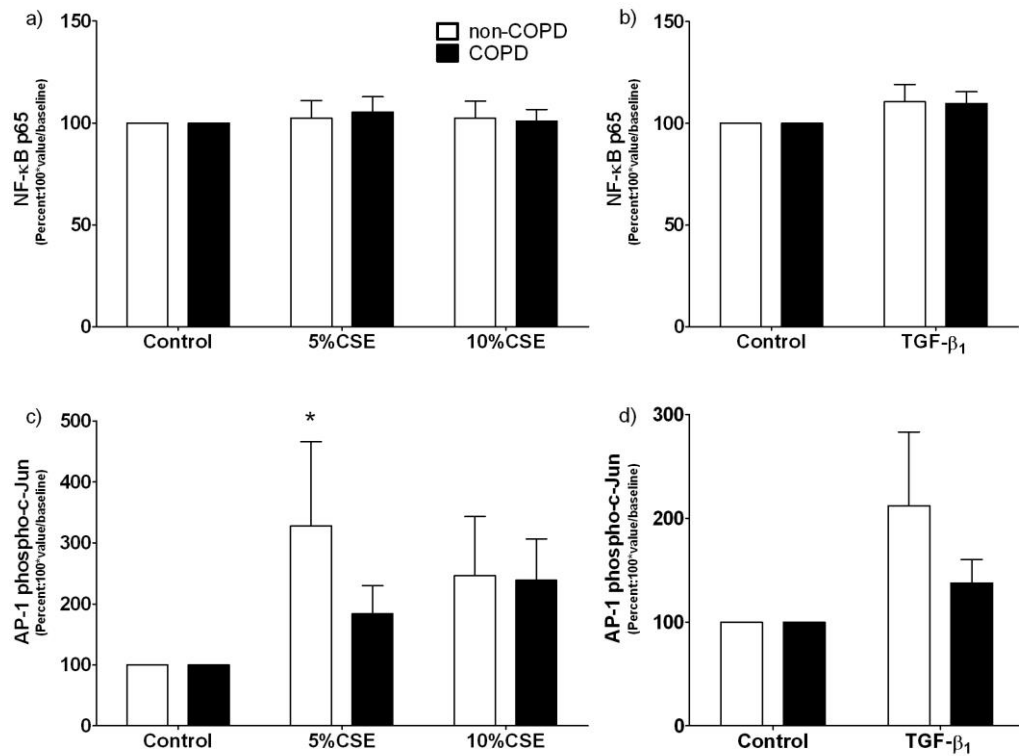


FIGURE S1. The activity of NF-κB subunit p65 and AP-1 subunit phospho-c-Jun in human ASM cells. The percent activities of a,b) NF-κB subunit p65 and c,d) AP-1 subunit phospho-c-Jun in the nuclear extract from human ASM cells from subjects with (n=5, black bar) and without (n=5, white bar) COPD after 60 minutes stimulation with cigarette smoke extract (CSE) or TGF-β₁ were measured by TransAM assay. Data were presented as mean ± SEM, two-way ANOVA plus Bonferroni post test, *p<0.05, compared with control.

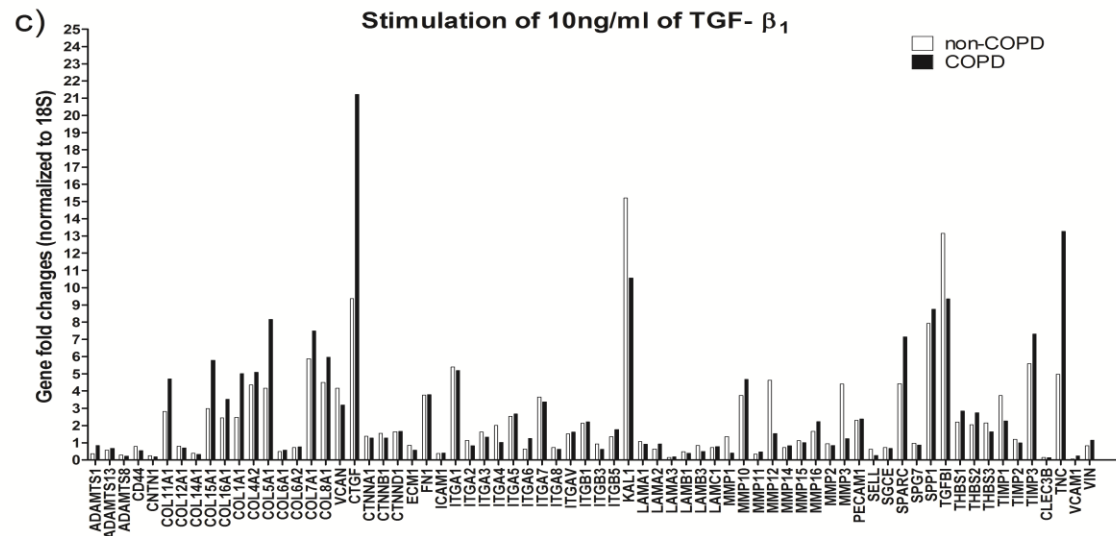
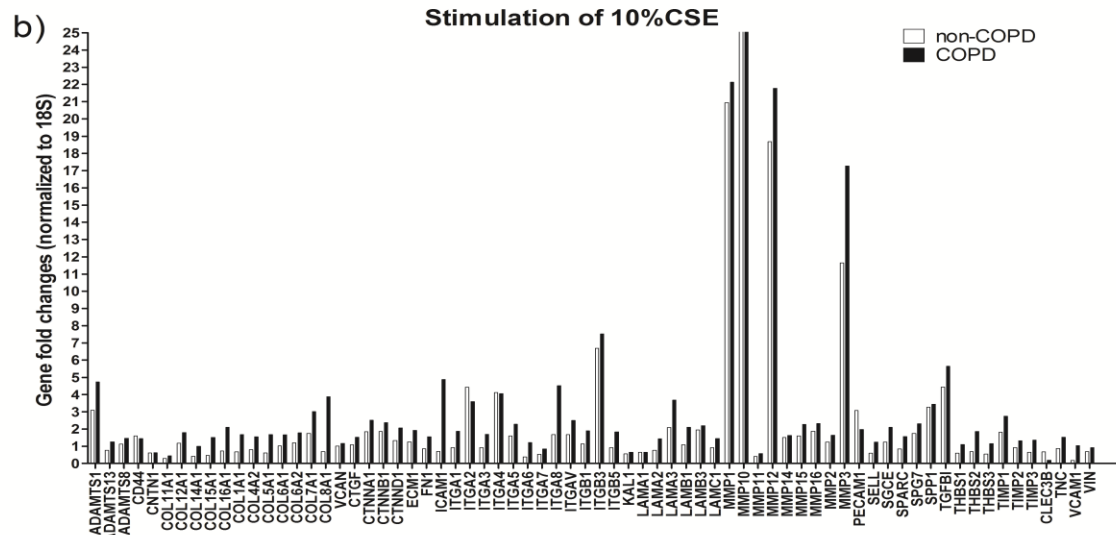
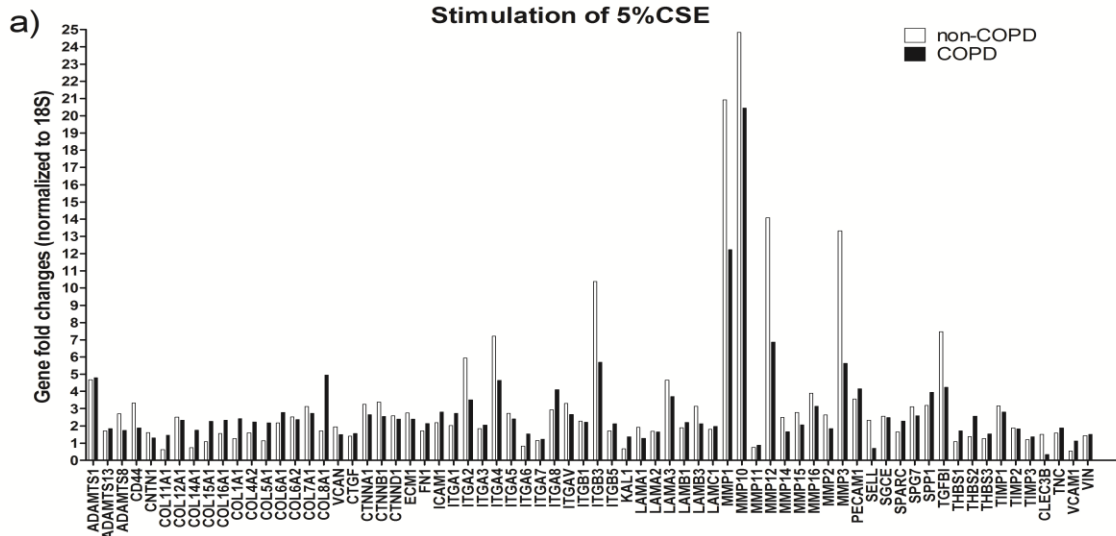


FIGURE S2. Fold change of (extracellular matrix) ECM and adhesion molecule related genes. The gene expression of ECM and adhesion molecule related genes of human ASM cells from subjects with (n=3, pooled, black bar) and without (n=3, pooled, white bar) COPD was detected after stimulated with a) 5% CSE, b) 10% CSE or c) 10ng/ml of TGF- β_1 for 48 hours by real time PCR array. The results were normalized to the endogenous control (18S rRNA), and presented as fold change. The X axis represents gene fold change and the Y axis represents gene abbreviation.

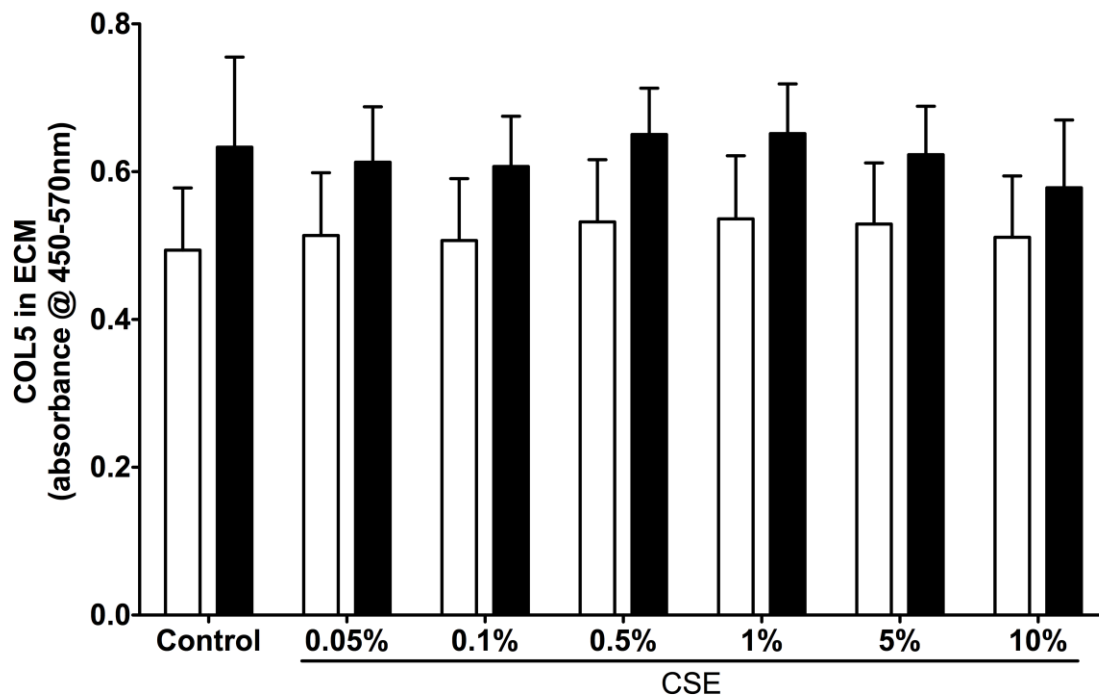


FIGURE S3. The deposition of collagen V (COL5) from human ASM cells. The deposited COL5 in the ECM from human ASM cells from subjects with (n=5, black bar) and without (n=5, white bar) COPD after 72 hours stimulation with cigarette smoke extract (CSE) or TGF- β_1 was measured by ECM ELISA. Data were presented as mean \pm SEM, two-way ANOVA plus Bonferroni post test.

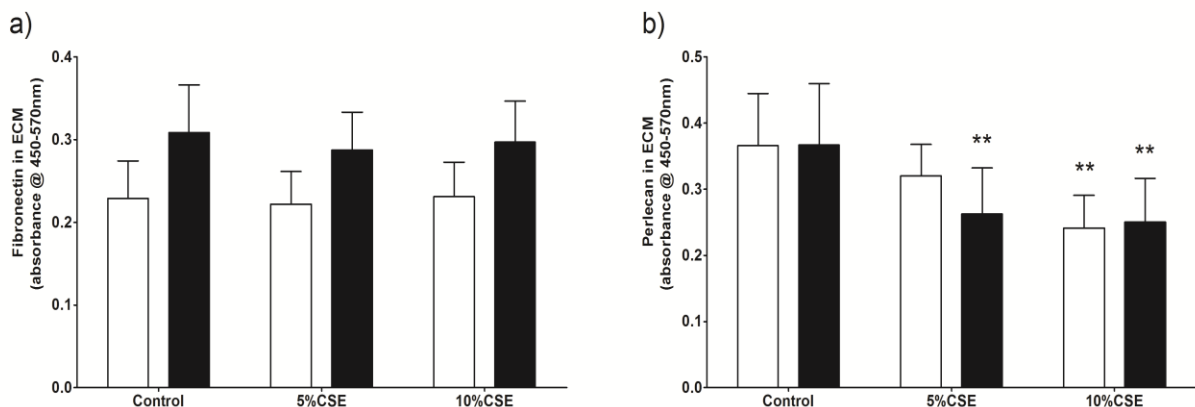


FIGURE S4. The deposition of fibronectin and perlecan. a) The deposited fibronectin in the ECM from human ASM cells from subjects with (n=5, black bar) and without (n=5, white bar) and b) the deposited perlecan in the ECM from human ASM cells from subjects with (n=4, black bar) and without (n=4, white bar) COPD after 72 hours stimulation with cigarette

smoke extract (CSE) were measured by ECM ELISA. Data were presented as mean \pm SEM, two-way ANOVA plus Bonferroni post test, $**P < 0.01$, compared with control.

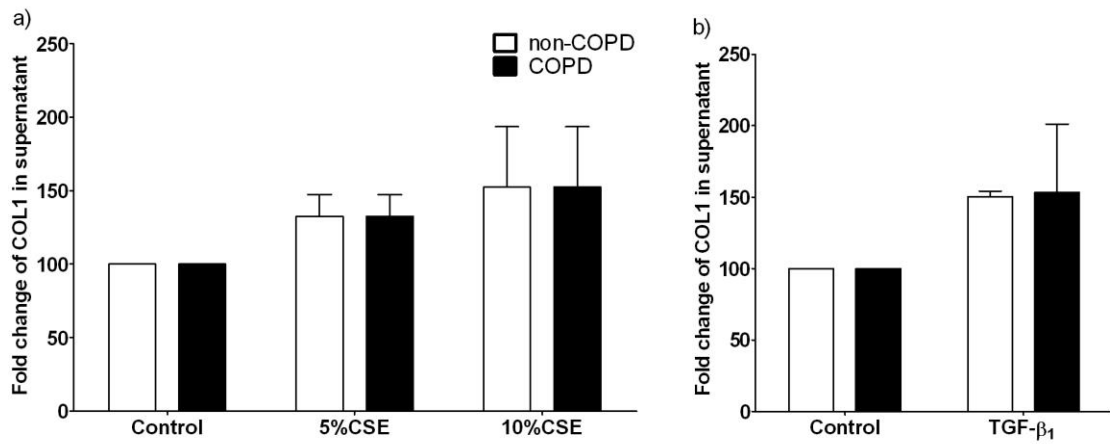


FIGURE S5. The release of collagen type 1 (COL1) in the supernatant from human ASM cells. The fold change of COL1 in the supernatant from human ASM cells from subjects with (n=5, black bar) and without (n=5, white bar) COPD after 72 hours stimulation with cigarette smoke extract (CSE) or TGF- β_1 were assessed by western blots. Data were presented as mean \pm SEM, two-way ANOVA plus Bonferroni post test.

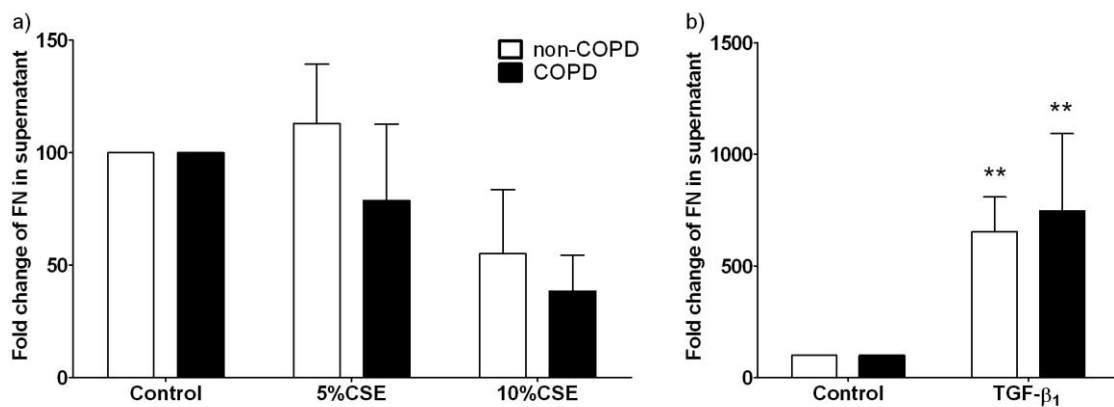


FIGURE S6. The release of fibronectin (FN) in the supernatant from human ASM cells. The fold change of FN in the supernatant from human ASM cells from subjects with (n=5, black bar) and without (n=4, white bar) COPD after 72 hours stimulation with cigarette smoke extract (CSE) or TGF- β_1 were assessed by western blots. Data were presented as mean \pm SEM, two-way ANOVA plus Bonferroni post test, $**p < 0.01$, compared with control.

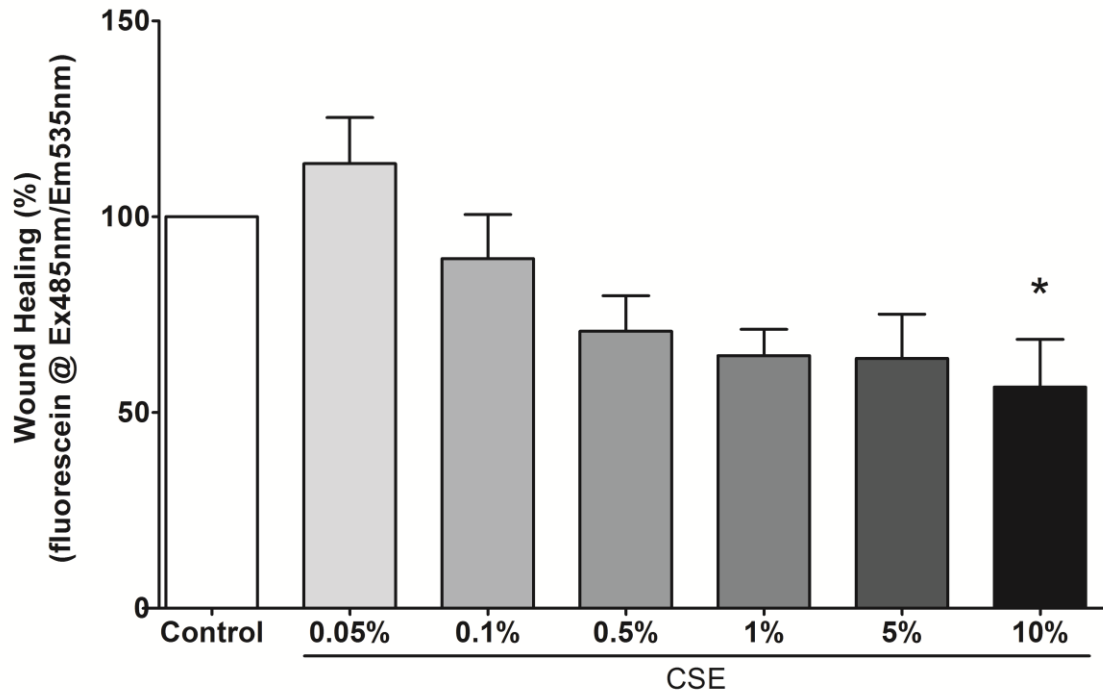


FIGURE S7. The effect of cigarette smoke extract (CSE) on wound healing. The percentage of 4 hours wound healing on CSE treated plate of human ASM cells (n=6) was measured by wound healing assay. Data were presented as mean \pm SEM, one-way ANOVA plus Bonferroni post test, * $p < 0.05$, compared with control.