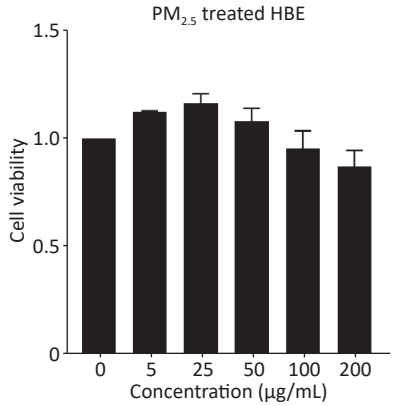
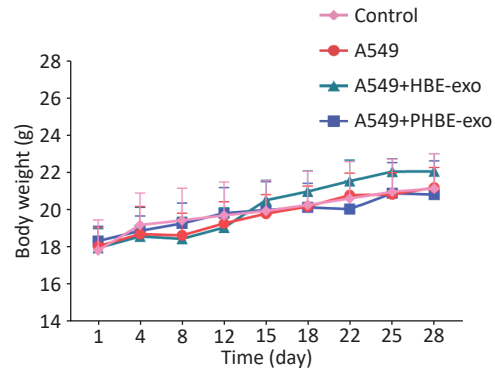
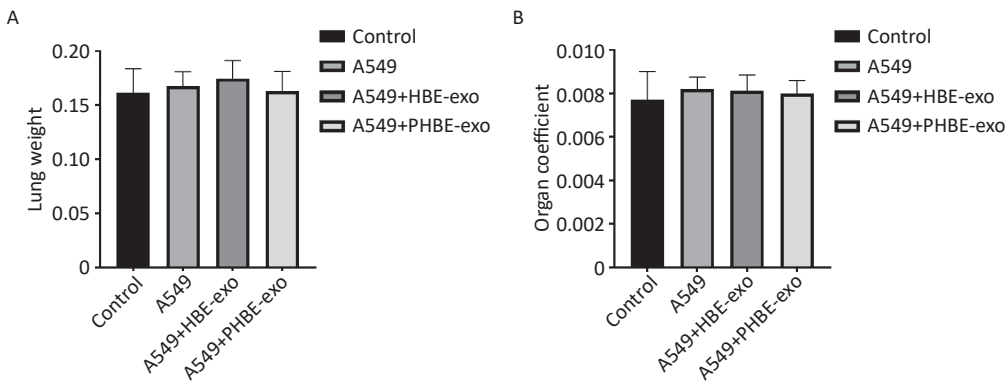


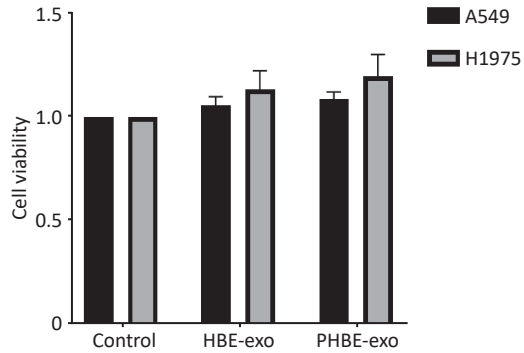
Supplementary Figure S1. The cell viability of HBE cells treated with $PM_{2.5}$. Lung cancer cells were treated with 5, 25, 50, 100, and 200 μg/mL $PM_{2.5}$. Cell viability of lung cancer cells was assessed by cck8 kit (mean ± SD, $n = 3$).



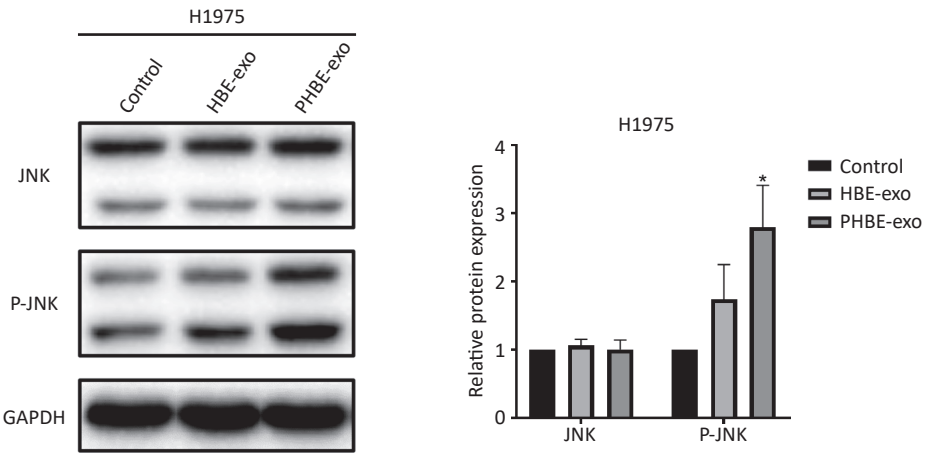
Supplementary Figure S2. The body weight of mice. Female BALB/c nude mice were divided in four groups randomly. Body weight of each mouse was measured before each injection (mean ± SD, $n \geq 7$).



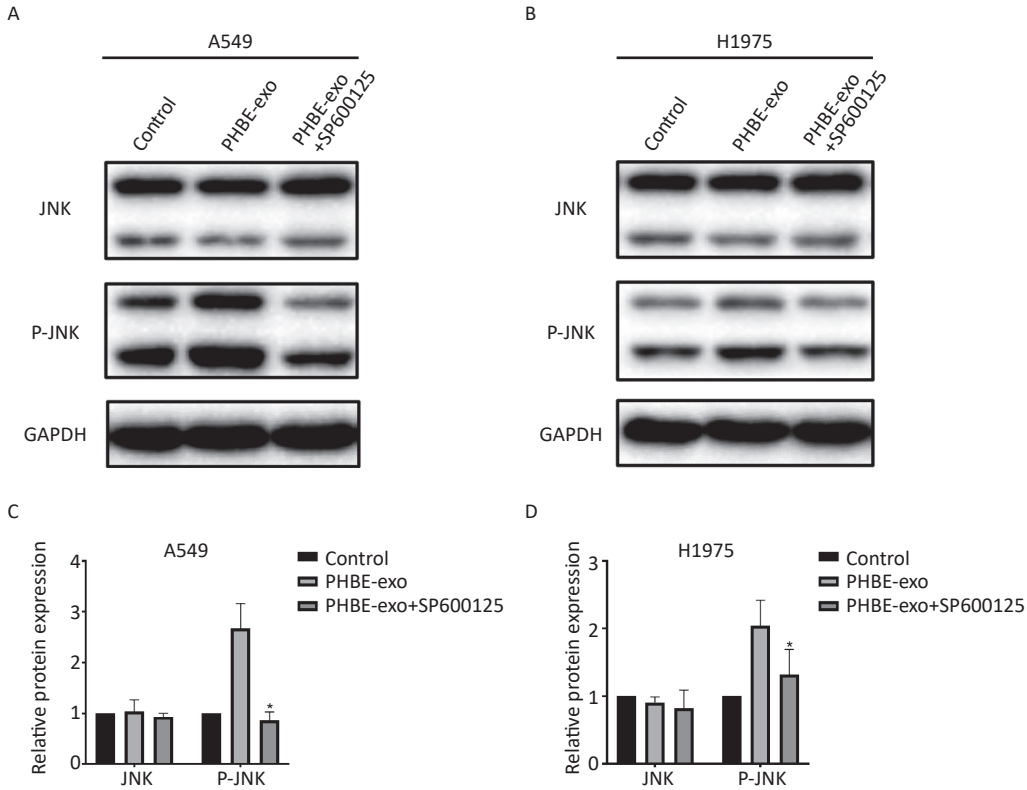
Supplementary Figure S3. The lung weight and organ coefficient of mice. Female BALB/c nude were divided in four groups randomly. Body weight were measured before the mice were sacrificed and the lung weight of each mouse was measured immediately after the anatomy (mean ± SD, $n \geq 7$).



Supplementary Figure S4. The effects of exosomes derived from $PM_{2.5}$-treated HBE cells on the viability of lung cancer cells. Lung cancer cells were treated with PBS, exosomes derived from human bronchial epithelial cell (HBE-exo) and exosomes derived from human bronchial epithelial cells treated with $PM_{2.5}$ (PHBE-exo). After 24 h, cell viabilities of lung cancer cells were assessed by cck8 kit (mean ± SD, *n* = 3).



Supplementary Figure S5. Exosomes derived from $PM_{2.5}$-treated HBE cells affected JNK signaling pathway in H1975 cells. Lung cancer cells H1975 were treated with PBS, exosomes derived from human bronchial epithelial cell (HBE-exo) and exosomes derived from human bronchial epithelial cell treated with $PM_{2.5}$ (PHBE-exo). Protein expression of JNK and phosphorylated JNK in H1975 cells were quantified by western blotting (mean ± SD, *n* = 3). $^{*}P < 0.05$, different from HBE-exo treated group.



Supplementary Figure S6. The JNK pathway activated by exosomes was effectively inhibited by SP600125. Lung cancer cells were treated with DMSO, exosomes derived from human bronchial epithelial cell treated with $PM_{2.5}$ (PHBE-exo), PHBE-exo+SP600125. Protein expression of JNK and phosphorylated JNK in A549 (A&C) and H1975 (B&D) were quantified by western blotting (mean ± SD, n = 3). $^{*}P < 0.05$, different from PHBE-exo treated group.