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Title Page

Early growth response gene 1 is essential for urban particulate matter-induced inflammation and mucus hyperproduction in airway epithelium

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HIGHLIGHTS

- PM induced Egr-1 expression in vitro and in vivo.
- Egr-1 positively regulated PM-induced inflammation and mucus hyperproduction.
- Egr-1 modulated inflammation response via the NF-κB pathway.
- Egr-1 modulated mucus production via the AP-1 pathway.

ABSTRACT

Particulate matter (PM) has been implicated as a risk factor for human airway disorders. However, the biological mechanisms underlying the correlation between PM exposure and adverse airway effects have not yet been fully clarified. The objective of this study was to explore the possible role of early growth response gene 1 (Egr-1) in PM-induced toxic effects in pulmonary inflammation and mucus