

综述

## Epac/Rap1信号通路在急性肺损伤中作用的研究进展

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**摘要** 急性肺损伤(ALI)中炎症信号通路的失调以及炎症因子平衡紊乱是其发生和发展的重要原因。能直接被cAMP活化的交换蛋白(Epac)在调节肺部气道炎症和细胞增殖方面是一个新的效应器,新的关于cAMP依赖性蛋白激酶A(PKA)非依赖性通路研究表明, cAMP/Epac/Rap1信号通路参与并行使许多类型细胞的功能,包括细胞分泌、细胞间黏附和连接、细胞凋亡、细胞增殖和分化等。cAMP能通过Epac/Rap1信号通路参与ALI的发病过程, Epac/Rap1信号通路是ALI防治的潜在靶点。本文综述Epac/Rap1信号通路在肺部相关炎症及急性肺损伤中作用机制的国内外研究进展。

**关键词** [急性肺损伤](#) [鸟嘌呤核苷酸交换因子类](#) [气道炎症](#) [环磷酸腺苷](#)

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## Progress in role of Epac/Rap1 signal pathway in acute lung injury

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### Abstract

The loss control of the inflammatory signal pathway and the disorder balance of the inflammatory cytokines is an important cause of acute lung injury (ALI). The exchange protein activated by cAMP(Epac) is a new effector in the regulation of the pulmonary airway inflammation and cell proliferation. New research on cAMP-dependent but PKA-independent pathways indicates that cAMP/Epac/Rap1 signal pathway is involved in the function of many cell types, including cell secretion, cell adhesion and connection, apoptosis, cell proliferation and differentiation. cAMP participates in the pathogenesis of ALI/ARDS through the Epac-Rap1 signaling pathway that is a potential target for the control of ALI/ARDS. This article reviews domestic and foreign research progress of the mechanism of the Epac-Rap1 signaling pathway in the lung-related inflammation and acute lung injury.

**Key words** [acute lung injury](#) [guanine nucleotide exchange factors](#) [airway inflammation](#) [cAMP](#)

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