综述

CIC-3氯通道蛋白调控细胞增殖机制的研究进展

Published at: November 05, 2014 2014年第34卷第5期

吴慧 [1] , 李红枝 [1] , 毛建文 [1]

[1]广东药学院生物学教研室，广州 510006

通讯作者 建文 毛 Email: jianwenmao@hotmail.com

DOI: 10.11714/j.issn.2095-6959.2014.05.035

基金：

国家自然科学基金 31371144, 81170339, 30800435

摘要

CIC-3是电压门控性氯离子通道家族的成员，主要作为容积激活性氯通道通过调节容积激活性氯电 流[Cl,(vol)]，调节细胞体积，细胞膜电位等影响细胞增殖。近年的研究发现CIC-3也可通过调节有丝 分裂前凝集 (premitotic condensation，PMC) 过程，或维持细胞囊泡酸化和细胞内氧压，或作为调 控因子通过Akt-GSK-3β信号通路和CaMKII调节的信号通路等途径参与细胞增殖的调控。

关键词： CIC-3 细胞增殖 氯离子通道

The mechanism of CIC-3 proteins on cell proliferation

WU Hui [1] , LI Hongzhi [1] , MAO Jianwen [1]

[1] Department of Biology, Guangdong Pharmaceutical University, Guangzhou 510006, China

Abstract

As a member of the CIC voltage-gated chloride channel family, CIC-3 mainly act as a volume-actived chloride channel to affect the cell proliferation by regulating the volume activation chloride current, the cell volume and membrane potential and so on. In recent researches, the study found that CIC-3 can also be involved in the regulation of the cell proliferation via several other mechanisms, such as regulate the process of premitotic

condensation (PMC), maintain intracellular vesicle acidification and the oxygen pressure, act as a regulatory factor involved in the Akt-GSK-3β signaling pathway and the signaling pathways regulated by CaMKII.

Keywords: CIC-3 cell proliferation chloride channel

全文

- PDF

引用

引用本文: 慧 吴, 红枝 李, 建文 毛. CIC-3氯通道蛋白调控细胞增殖机制的研究进展[J]. 临床与病理杂志, 2014, 34(5): 630-635.

Cite this article as: WU Hui, LI Hongzhi, MAO Jianwen . The mechanism of CIC-3 proteins on cell proliferation[J]. Journal of Clinical and Pathological Research, 2014, 34(5): 630-635.