

论著

TEF-1 δ 基因真核细胞稳定表达系统的构建与鉴定

雷毅雄¹, Pius Joseph², 陈家¹, Tong²man Ong²

1. 广州医学院化学致癌研究所, 广东 广州 510182; 2. National Institute for Occupational Safety and Health, Morgantown, WV, USA

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摘要 目的: 构建TEF21 δ (mouse translation elongation factor21 δ) 的稳定表达系统。方法: 采用磷酸钙介导转染技术和G418 细胞筛选法,以pcDNA3. 1/ V52His2TOPO 为表达载体,构建了TEF21 δ 转基因CHO 和COS7 细胞系,Western Blot 分析与鉴定表达蛋白。结果: 在10 株转染和经G418 反复筛选的CHO 细胞系中,有3 株(编码为COH2pcDNA3. 12TEF21 δ # 3, # 6, # 14) 具有高效稳定表达的TEF21 δ 编码蛋白质(Mr 约31 \times 103),其余CHO 细胞株的TEF21 δ 蛋白质表达相对较弱或无表达。在4 株转染和经G418 反复筛选的COS7 细胞系中,4 株细胞(编码为COS72pcDNA3. 12TEF21 δ # 4, # 8, # 14 和# 17) 均有高效稳定的TEF21 δ 编码蛋白表达,相应的无转染组及载体对照组的CHO 和COS7 细胞均无TEF21 δ 蛋白质表达。结论: 这两类 TEF21 δ 转基因哺乳动物细胞稳定表达系统已成功构建与鉴定,该表达系统的建立对于TEF21 δ 这一新基因的生物化学功能研究,尤其是镉的致癌作用与致癌机制的研究有重要应用价值。

关键词 [TEF-1 \$\delta\$ 基因](#) [稳定转染](#) [CHO 细胞](#) [COS7 细胞](#) [Western Blot](#)

CONSTRUCTION AND IDENTIFICATION OF STABLE EXPRESSION SYSTEM OF KARYOCYTES WITH TEF-1 δ GENE

LEI Yi-xiong¹, Pius Joseph², CHEN Jia²kun¹, Ong Tong-man²

1. Institute for Chemical Carcinogenesis, Guangzhou Medical College, Guangzhou 510182, P.R. China. 2. Molecular Epidemiology Laboratory, Toxicology and Molecular Biology Branch National Institute for Occupational Safety and Health, Morgantown, WV, USA

Abstract Purpose : To construct and identify the stable expression system of karyocytes with TEF2 δ gene. Methods : Two stable transfections of CHO and COS7 cells with plasmid (pcDNA3. 1/ V52His2TOPO Vector) expressing TEF21 δ cDNA were established by using calcium phosphate and G418 selection protocols. Results : The results showed that , after G418 selection and western blotting analysis , 3 out of 10 CHO cell lines transfected with TEF21 δ cDNA expressed very high levels of TEF21 δ encoded protein with an approximately molecular weight of 31 kDa. as compared with vector control transfectants that showed no expression , and compared with the other cell lines that expressed relatively low proteins. Similarly , 4 out of 4 COS7 cell lines had significant overexpression of TEF21 δ encoded protein. The names of these stable transfection cell lines were CHO2pcDNA3. 12TEF21 δ , # 3 , # 6 and # 14 as well as COS72pcDNA3. 12TEF21 δ # 4 , # 8 , # 14 and # 17 , respectively. Conclusion : These cell lines can be applied to functional studies of the TEF21 δ gene , and these are the optimal cell lines for studies on the underlying molecular carcinogenic mechanisms of Cd carcinogenesis.

Keywords [TEF-1 \$\delta\$ gene](#) [Stable transfection](#) [CHO cells](#) [COS7 cells](#) [Western Blot](#)

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· 雷毅雄	
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