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hTERT启动子调控的异种抗原基因-α-1,3GT表达载体的构建及其在肺癌细胞中的靶向表达 点此下载全文

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摘要：

目的：构建人端粒酶逆转录酶（human telomerase reverse transcriptase，hTERT）启动子调控的异种移植抗原 α 1,3
syltransferase， α 1,3GT ）基因真核表达载体，研究其调控的 α 1,3GT 在肿瘤细胞中的靶向表达。方法：将前期克隆并测
克隆到pEGFP hTERTp质粒中，构建 α 1,3GT 真核表达载体pEGFP hTERTp GT。分别将pEGFP hTERTp GT和CMV启动子调
GFP N1 GT转染端粒酶阳性的人肺癌细胞A549及端粒酶阴性的正常人胚肺成纤维细胞MRC 5。RT PCR检测转染细胞中 α 1,3GT
式细胞仪检测α gal抗原的表达。结果：成功构建了pEGFP hTERTp GT真核表达载体。转染pEGFP N1 GT的A549和MRC 5中均有
染pEGFP hTERTp GT的A549中有 α 1,3GT mRNA的表达，而端粒酶阴性的MRC 5细胞中无α 1,3GT mRNA的表达。转染
均可表达异种移植抗原α gal；转染pEGFP hTERTp GT质粒的A549中有α gal的表达，而MRC 5细胞中无α gal的表达（ P <0.
的 α 1,3GT 基因能靶向性表达在端粒酶阳性的肺癌细胞中，并合成异种移植抗原α gal。

关键词：人端粒酶逆转录酶；肺肿瘤；α-半乳糖基；α-1 3半乳糖基转移酶；靶向性表达

Construction of xenoantigen α-1,3GT gene expression vector regulated by hTERT promoter and its targetir
cancer cells Download Fulltext

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Fund Project:Supported by the National Natural Science Foundation of China (No. 30270589, No. 30470762)

Abstract:

Objective:To construct an xenoantigen synthetase α 1,3 galactosyltransferase (α 1,3GT) eukaryotic e
by human telomerase catalytic subunit (hTERT) promoter, and to investigate its targeting expression of α 1,3
Methods: Previously prepared and confirmed pig α 1,3GT gene was inserted into pEGFP hTERTp plasmid to
expression vector pEGFP hTERTp GT. pEGFP hTERTp GT and pEGFP N1 GT (α 1,3GT eukaryotic expression vect
promoter) were transfected into telomerase positive human lung adenocarcinoma A549 cells and telomerase n
lung fibroblast MRC 5 cells. 1,3 GT mRNA expression in the transfected cells was detected by RT PCR. Expressio
transfected cells was examined by immunofluorescence and flow cytometry. Results: pEGFP hTERTp GT eukary
successfully constructed. Both A549 and MRC 5 cells transfected with pEGFP N1 GT showed expression of α 1
not telomerase negative MRC 5 cells expressed α 1,3GT mRNA after transfection with pEGFP hTERTp GT. Fu
MRC 5 cells transfected with pEGFP N1 GT showed expression of xenoantigen α gal; A549 but not MRC 5 ce
gal after transfection with pEGFP hTERTp GT (P <0.01) . Conclusion: α 1,3GT gene under the regulation
specifically expressed in telomerase positive lung cancer cell lines, which can induce production of xenoantigen

Keywords:human telomerase reverse transcriptase (hTERT); lung neoplasms; α-galactosyl (α-gal); α 1 3 galac
expression

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