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// : // : // :

HSV.tk-Zeo GAL -VP

HeLa

MTT

G

HSV.tk-Zeo  
pcG VP

pcDBHZm  
pcDBHZm

HeLa

GCV

( )  
pcDBHZm

pcG4mVP

( ) pCCI  
GCV pcDBHZm+pG4VP  
VP GAL

HSV.tk-Zeo

-VP

GCV

cDNA

GAL -VP

) GCV GAL -VP  
) GAL -VP (

) GAL -VP GAL  
) GAL -VP (

GCV

(

HSV.tk-Zeo GAL -VP

(.)

(÷)

) ( )  
 DNA (GCV ) ( ICE  
 VP GAL -VP -  
 GAL GAL  
 ( )  
 YVAD  
 ( )  
 - ( ) ICE  
 HSV.tk-Zeo. HSV.tk-Zeo GAL VP  
 -  
 GAL -VP ( )  
 HSV.tk-Zeo  
 GCV  
 HSV.tk-Zeo  
 Zeo HSV.tk cDNA  
 ÷ HSV.tk  
 ( ) SV HSV.tk-Zeo (HSV.TK)  
 ( ) SV HSV.tk-Zeo (GCV)  
 (÷ kb) ;pcDNA , (-)Neo (GCV-P3)  
 SV (CMV) HSV.TK GCV  
 GCV  
 Zeo  
 Sh.ble  
 NX(L) MWG-Biotech Zeo  
 Sh.ble ( )  
 NX (R) ÷ AATTCGCGGCCGCCCCCTCTAGAC  
 AATTGTCTAGAGGGGGCGGCCGCG DNA  
 DNA :  
 EcoRI HindIII NheI  
 DNA XhoI NotI  
 NEB T<sub>4</sub> DNA Ligase Zeo  
 w/v :  
 DNA : DNA  
 DNA : DNA  
 Tris DNA HeLa Zeo  
 : HeLa  
 HeLa

DNA  
 DNA  
 GAL -VP  
*E.coli*

DNA  
 T  
 pcDNA , (-)

DNA  
 GAL $\epsilon$ -VP $\Delta$

GAL -VP  
 ( )  
 ÷  
 pM1V

GAL -VP  
 GAL  
 DNA  
 VP  
 ( ÷ )  
 ( )  
 ÷  
 HindIII

*EcoRI*  
*EcoRI*

*SmaI*

( ÷ )  
*pcG4mVP*

GAL  
 pcG $\epsilon$ mVP  
*EcoRI*  
*EcoRI*

VP  
 pcG VP

VP GAL

DNA  
 NX(R) NX(L)  
 DNA  
 T  
*E.coli*

DNA  
 CO  
 °C  
 DMEM  
 HeLa  
 (FCS)  
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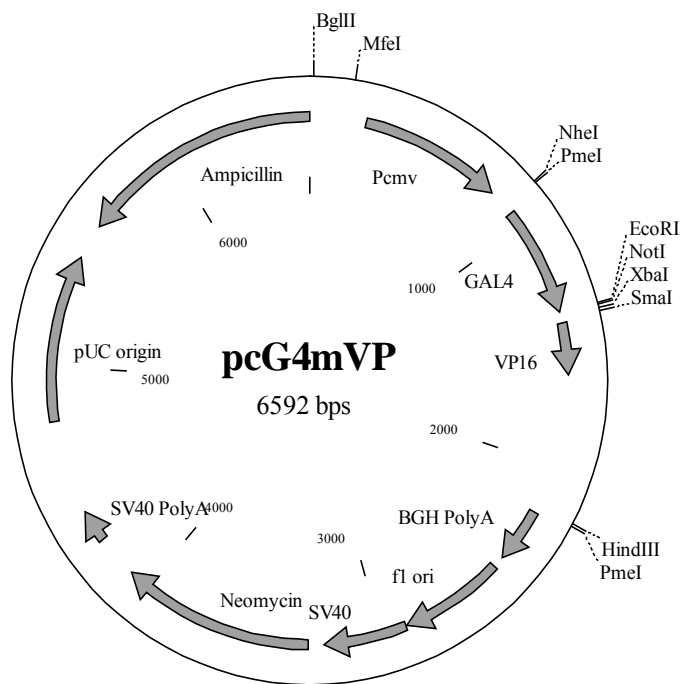
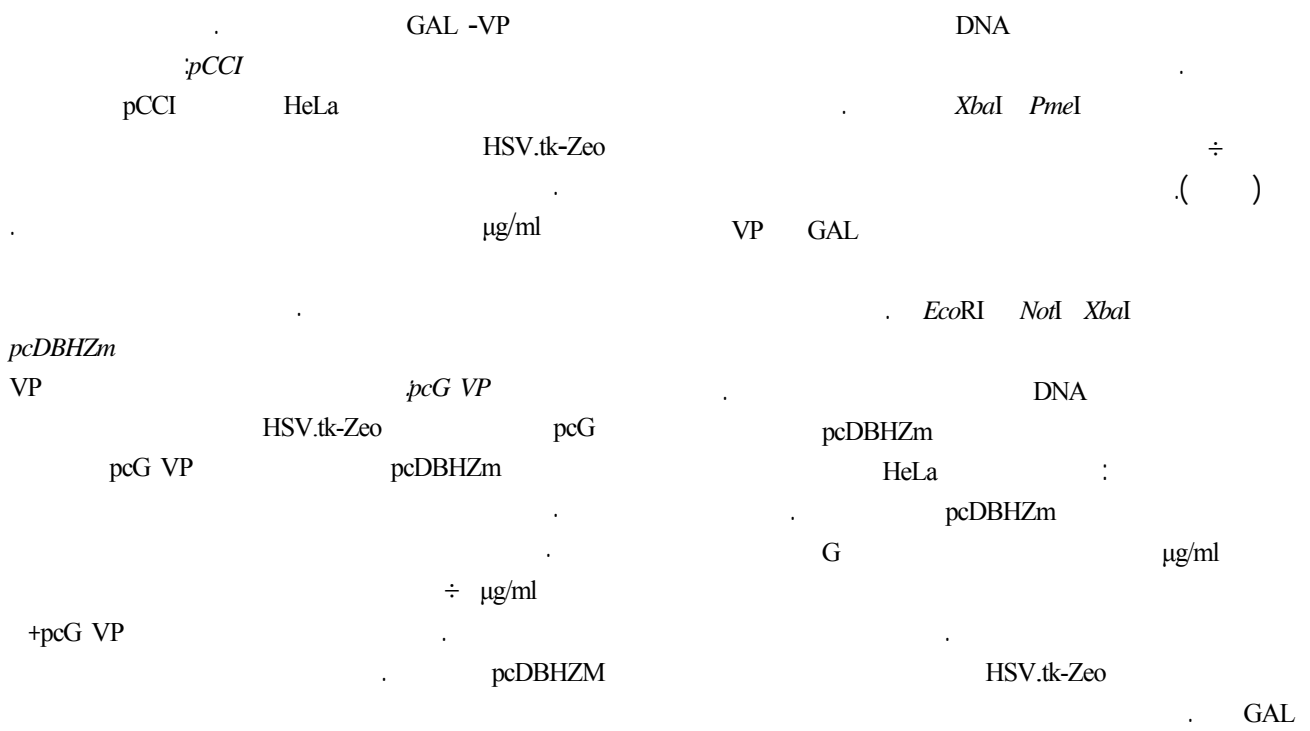
(G)  
 :GCV  
 GCV

*in vivo* *in vitro*  
 GCV  
 GCV  
 GCV  
 (GCV-P)  
 GCV-P  
 GCV  
 ( )  
 GCV  
 :MTT

*in*  
 DNA  
 GCV-P  
 GCV  
 HSV.TK  
 (GCV-P)  
 HSV.TK  
 ( )  
 GCV  
 :MTT

MTT  
 ( )  
 (۳-(۴,  $\Delta$ -dimethylthiazolyl)-۲)-۲,۵-  
 diphenyltetrazolium bromide; MTT)  
 ( )  
 ( ÷ )

*pcG VP*  
 -  
*HindIII* *NheI*  
 pcDNA , (-)  
 pM1V  
 GAL VP  
 (*HindIII* *NheI*)



(CMV) pcG VP pcG4mVP : DNA  
XbaI NotI EcoRI



GAL DNA  
 HSV.tk cDNA TATA (HSV.tk-Zeo) Zeo pcDBHZm  
 HeLa G (HSV.tk-Zeo) Zeo GCV  
 +pcG VP Zeo  
 pcDBHZm pCCI pcDBHZM  
 pcG VP pcDBHZM+pcG VP  
 G GCV pCCI  
 HSV.tk-Zeo GAL -VP  
 ( ) MTT  
 GCV  
 ( )  
 GCV pcDBHZM+pcG VP (÷ )  
 pcDBHZm  
 GCV pcDBHZm  
 GCV  
 GCV µg/ml pcDBHZm  
 pcDBHZM+pcG VP -VP  
 ( ) ( ) pCCI HSV.tk-Zeo HSV.tk-Zeo GAL  
 pcDBHZM+pcG VP -VP  
 GCV pCCI HSV.tk-Zeo GAL  
 GCV (HSV.TK) HSV.tk  
 GCV µg/ml (GCV)  
 (GCV-P3)  
 pcDBHZm HSV.YK ( ) GCV  
 HSV.tk-Zeo  
 HSV.tk-Zeo  
 GAL -VP Zeo  
 pcDBHZM+pcG VP (Sh.ble) zeo  
 GAL -VP HSV.tk-Zeo HSV.TK-Zeo ( )  
 HSV.tk-Zeo GCV  
 GAL -VP Zeo ( ) HSV.TK  
 ( )  
 GCV  
 ( ) ( ) ( )  
 DNA ( ) (GCV ) ( ) ( )  
 ÷) VP GAL  
 GAL -VP GCV ( )  
 ( )  
 pcGmVP  
 VP GAL XbaI NotI EcoRI pcDBHZm  
 HSV.tk-Zeo

VP GAL

GCV

HSV.tk-Zeo

GCV

GAL

pcDBHZGmV pcG VP

VP

GCV

GAL -VP

RT-PCR

HSV.tk-Zeo

GCV

GAL -VP

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