

(19)  
(12)

(KR)  
(B1)

(51) 。 Int. Cl.<sup>7</sup>  
C12N 15/11

(45)  
(11)  
(24)

2004 08 09  
10-0443426  
2004 07 27

(21) 10-2001-0022462  
(22) 2001 04 25

(65)  
(43)

10-2002-0082725  
2002 10 31

(73)

가 459-24

3 689-11

77

109 1103

3가 62-1

(72)

3 689-11

56-1

3가 62-1

77

109 1103

(74)

:

(54) S R G 3

T

SRG3 T CD2 (hCD2 promoter) A (polyA sequ  
ence) 가 LCR(locus control region) SRG3 cDNA (c  
onstruct), SRG3 , (glucocorticoids) 가  
SRG3 , SRG3 가 T  
T 가 , 가 .



MHC (peptide antigen) 가  
(positive selection process)  
CD4 CD8 (Janeway C.A. Jr. *et al.*, *Immunity*, 1, 3-6, 1994).

CD4/CD8 가 TCR 가 (Surh C.D. and Sprent J. *et al.*, *Nature*, 372, 100-103, 1994).

가 MHC (negative selection process)  
가- 가 가 (Matzinger P. *et al.*, *Nature*, 308, 738-741, 1984; Sprent J. *et al.*, *Immunol. Rev.*, 101, 173-190, 1988; Schwartz R.H. *et al.*, *Cell*, 57, 1073-1081, 1989).

가 TCR 가 MHC (Ashton-Rickardt P.G. *et al.*, *Cell* 76, 651-663, 1994; Sebzda E. *et al.*, *Immunol.* 17, 829-874, 1999).

가 가 가 (Yang Y. and Ashwell J.D., *J Clin. Immunol.*, 19, 337-349, 1999).  
(adrenal gland)

CD4 CD8 T  
(Cohen J. *et al.*, *Semin. Immunol.*, 4, 363-369, 1992).

T 가 가

(Dexamethasone) (Hydrocortisone)

SRG3가 (Jeon S.H. *et al.*, *J. Exp. Med.* 185, 1827-1836, 1997).

SRG3 T SRG3 SRG3 SRG3가 SRG3  
가 SRG3 가 가

SRG3 (Notch) SRG3  
가 CD4 CD8 T  
(Deftos M.L. *et al.*, *Immunity*, 9, 777-786, 1998).

(IC) SRG3 1 SRG3 (Deftos M.L. *et al.*, *Immunity*, 9, 777-786, 1998).

SRG3 SRG3 가 SRG3

SRG3 T T 가 SRG3  
T T 가 가

가 T 가

CD2 SRG3 cDNA

LCR (locus control region) SRG3

가

LCR (locus control region) CD2 SRG3

SRG3 cDNA가 CD2 SRG3

CD2가 T

SRG3 cDNA 3'- (3'-terminus) A LCR

CD2 SRG3 3'

LCR RNA T SRG3 ( 2 ).

CD2 A LCR (Greaves *et al.*, *Cell*, 56, 979

-986, 1989) SRG3 cDNA

3.4 kb CD2 SRG3 cDNA가 LCR 3.4 kb SRG3 cDNA SRG3

( 2 ).

CD2 SRG3 SRG3 가 SRG3

가 T T

DNA CD2 SRG3 cDNA, A

DNA

2001 3 16 ( : KCTC

0974BP)( 3 ).

G3 cDNA T CD2 SR SR

A DNA

DNA SRG3 SRG3 가

CD2 DNA SRG3 cDNA 가 (

3 ). SRG3 cDNA SRG3 cDNA

T CD2 T

T SRG3 SRG3 cDNA가

T 가가 T SRG3 가

1) T SRG3 cDNA (

1);

2) T SRG3 cDNA

( 2);

3) ( 3);

4) 가 ( 4) , T CD2 , Lck , CD4 minigene , TCR CD3 , SRG3 cDNA S  
 RG3 cDNA (hGH PolyA), (bGH PolyA), CD2 (hCD2 polyA), SV40 (SV40 PolyA) 3'  
 A CD2 LCR (hCD2 locus control region) RNA  
 2 CD2 , Lck , CD4 minigene promoter, CD3 가  
 3 CD2 , (guinea pig), (rat), 1  
 2 (杆) (stem cell)  
 4 가 , 가 가  
 DNA DNA SRG3 cDNA가 가  
 1 DNA PCR  
 < 1> SRG3 T SRG3 T  
 CD2 SRG3 cDNA  
 (cloning) SRG3 cDNA(Jeon, S.H. *et al.*, *J. Exp. Med.*, 185, 1827-1836, 1997)  
*Bam*HI/ *Dra*I 3.4 kb SRG3 cDNA Klenow DNA DN  
 A blunt end 3.4kb SRG3 cDNA 3.4kb SRG3 cDNA CD2 (G  
 reaves *et al.*, *Cell* 56, 979-986, 1989) CD2 A LCR *Sma*I  
 T SRG3 'pCD2-SRG3  
 ( 2).  
 SRG3 cDNA가 *Bgl*II 3kb DNA  
 SRG3 cDNA가 pCD2-SRG3 ( 1).  
 < 2> CD2 A CD2 LCR SRG3 cDNA 가  
 1 pCD2-SRG3 CD2 A CD2 L  
 CR SRG3 cDNA가 , SRG3 cDNA 14.6 kb *Kpn*I *Not*I  
 14.6 kb  
 2001 3  
 16 ( : KCTC 0974BP)(Hogan, B. *et al.*, *Manipulating the Mouse Embryo: A Laboratory Manual*, Cold Spring Harbor, New York: Cold Spring Harbor Laboratory Press).  
 < 3>  
 2 가 (FVB strain, Macrogen )  
 2 가 (FVB strain, Macrogen )  
 DNA 3 1 cm DNA  
 1 2 SRG3 cDNA 3'  
 PCR DNA SRG3 cDNA 800 bp PCR 1  
 DNA SRG3 cDNA 14.6 kb DNA  
 ( 4a 4b ).  
 < 1> SRG3 SRG3  
 3 SRG3 cDNA가  
 (western blotting) (10<sup>7</sup> ) SDS-PAGE(SDS  
 -polyacrylamide gel electrophoresis)

TBS/Tween-20( 'TBST' ) 5% (blocking solution)  
 SRG3, BRG1 Lck 가 3  
 HRP(horseradish pero  
 xidase)가 TBST 15 2 TBST 15  
 3 . ECL (Amersham Pharmacia, Sweden) X- (X-r  
 ay film) SRG3, BRG1 Lck - (Bio-Rad Protein assay)  
 (Gel-P  
 ro Analyzer software, Media Cybernetics, USA) (band intensity)

BRG1, Lck B  
 SRG3 가 SRG3 ( 5 ). 2  
 SRG3 가 SRG3 가  
 < 2> T T (flow cytometry)

PE (Phycoerythrin)가 CD4 FITC (Fluorescence isothiocyanate)가 CD8  
 ne serum) PBS (Phosphate buffered saline) 1ml 2% FBS(fetal bovi  
 Side scatter) PBS 1 Mℓ (CellQuest software) FACStar plus  
 (flow cytometer, Becton Dickinson) FSC (Forward scatter) SSC (

가 10<sup>-8</sup> M 10<sup>-7</sup> M 10<sup>-6</sup> M 가  
 T 가 ( 6 ). , SRG3  
 T FAS , (

7 ).  
 < 1> (specific apoptosis)(%) = 100 X (A - B)/(100 - B)  
 A: 가 가 (%)  
 B: 가 가 (%)

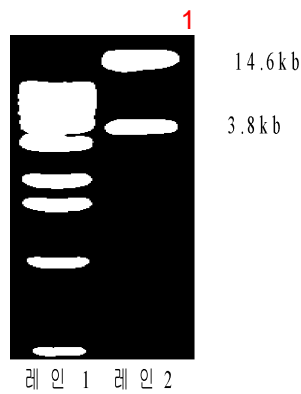
(Deftos M.L. *et al.*, *Immunity* , 9, 777-786, 1998)  
 가 T  
 , 10<sup>-8</sup> M 10<sup>-7</sup> M 10<sup>-6</sup> M T  
 FAS T 가 SRG3  
 ( 6, 7 ). T 가

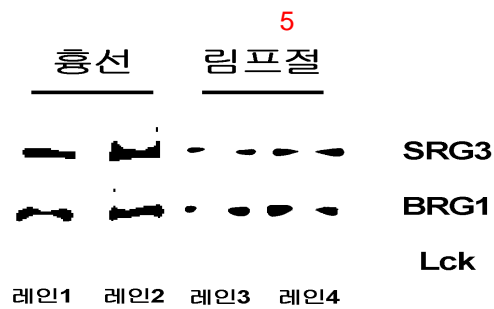
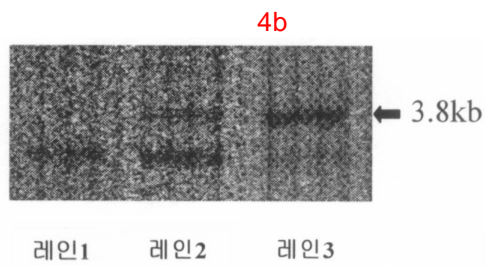
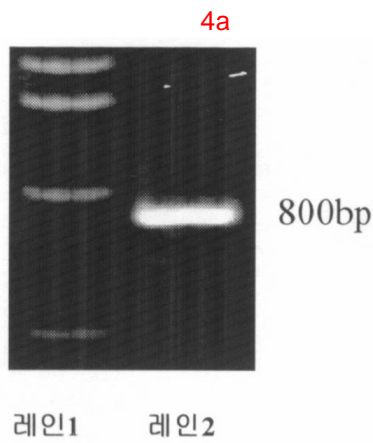
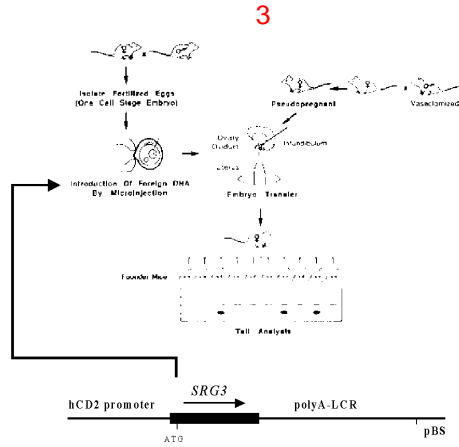
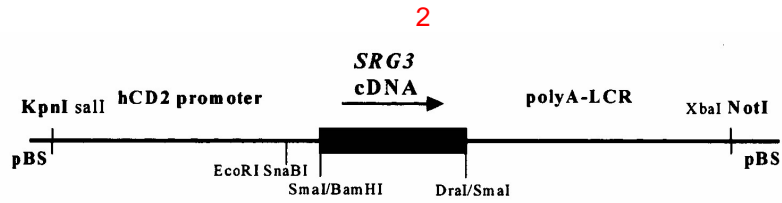
< 3> T 가  
 T 가 가 가  
 (Restraint stress) 가 T 가 가 8  
 50ml Falcon Tube 16 가 가  
 가 T (Coulter counter, Coulter)  
 T (flow cytometer) T T  
 가 T 가  
 ( 8 ).

T 가 T SRG3 가

(57)

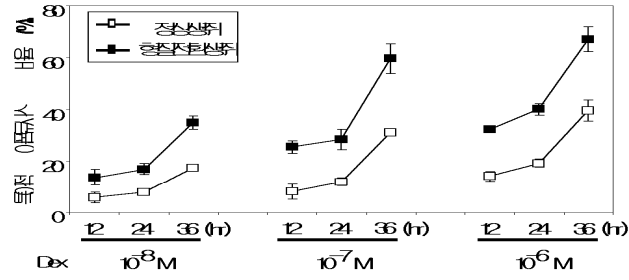
1. CD2 , SRG3 cDNA CD2 A  
 T CD2 LCR (locus control region)  
 (fusion gene construct)  
 2.  
 3.  
 4. pCD2-SRG3  
 1  
 5.  
 1  
 6. ( : KCTC 0974BP).  
 1  
 7.  
 1  
 8. 가  
 7  
 9. SRG3 cDNA ( 1) T ( SRG3 cDNA  
 1) T LCR T ( 2);  
 2) A ( 3);  
 3) 가 ( 4)  
 4) 7  
 10. CD2 , Lck , CD4 minigene  
 9 , TCR 1 T  
 , CD3  
 11. A CD2 LCR, A  
 9 (hGH PolyA), (bGH PolyA), CD2 (hCD2 polyA), SV40 (SV40 PolyA)



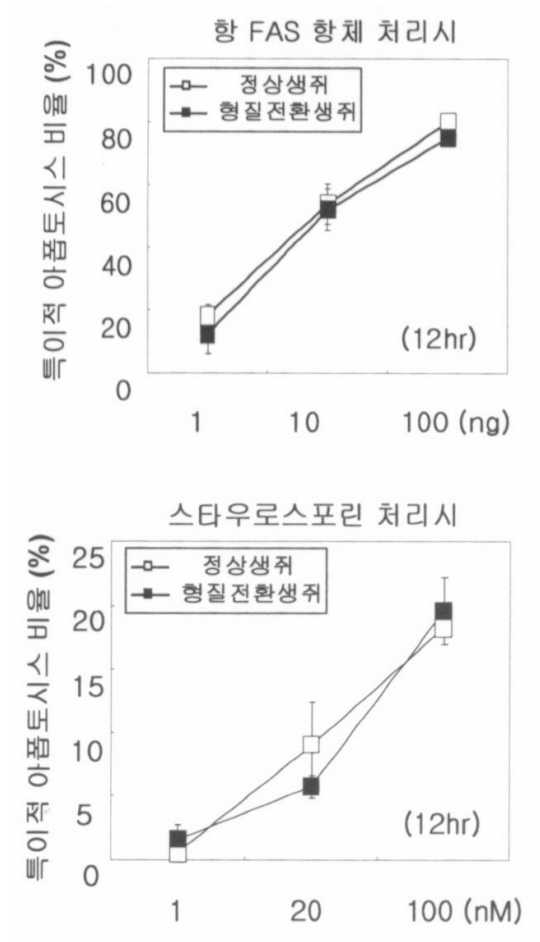




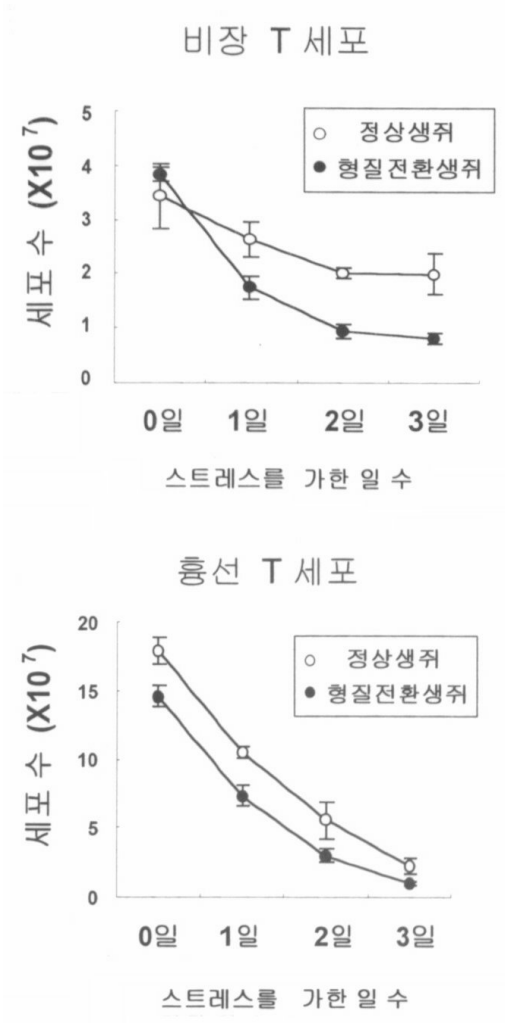
6



7



8



<110> SEONG, Rho Hyun JANG, Jae Jin KIM, Kil Soo Bio Genomics. INC. <120>  
 Transgenic animal expressing SRG3 protein in T cells specifically and a method for preparing  
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 ial Sequence <220> <223> reverse primer <400> 2 gtcaactgag cgacttgat c