

Figure S1. Vectors for lentiviral construction.

(A) rPPARG

Vector information:

General: 11615bp

HIV-1_5_LTR, trunkHIV-1_3_LTR: 835-1015

psi: 1067-1204

RRE: 1680-1913

ORF frame 1: 1558-2445

Ubiquitin Promoter: 2617-3833

3FLAG: 3880-3957

SV40 promoter: 3964-4341

EGFP: 4350-5069

IRES: 5092-5676

Puromycin: 5683-6282

WPRE: 6309-6896

HIV-1_5_LTR, trunkHIV-1_3_LTR: 7420-7600

pBR322_origin: 10467-9848

Ampicillin: 11482-10622

AmpR_promoter: 11552-11524

CAG_enhancer: 318-605

CMV_immeary_promoter: 239-810

Primer locations and sequences:

Ubi-F (3756-3778) : GGGTCAATATGTAATTTTCAGTG

FLAG-R-1 (3963-3943) : GCTAGCTCATTTGTCGTCATC

The insertion sequence is shown in red, the vector sequence is shown in black, and the restriction site is underlined.

CGTTTTTGGCTTTTTTGTAGACGAAGCTTGGGCTGCAGGTGCGACTCTAGAGGATCCCCGGGTACCGGTCGCCACCATGGGT
GAAACTCTGGGAGATTCTCCTATTGACCCAGAAAGCGATTCCCTTCACTGATACACTGTCTGCAAACATATCACAAGAAATG
ACCATGGTTGACACAGAGATGCCATTCTGGCCCACCAACTTTGGGATCAGCTCCGTGGATCTCTCCGTAATGGAAGACCAC
TCCCCTCCTTTGATATCAAGCCCTTCACTACTGTTGACTTCTCCAGCATTCTACTCCACATTACGAAGACATTCCATTAC
AAGAACAGATCCAGTGGTTGCAGATTACAAGTATGACCTGAAACTTCAAGAGTACCAAAGTGCAATCAAAGTGGAGCCT
GCATCTCCACCTTATTATTCTGAGAAGACTCAGCTCTACAATAAGCCTCATGAAGAGCCTTCCAACCTCCCTCATGGCAATT
GAATGTCGTGTCTGTGGAGATAAAGCTTCTGGATTCTCACTATGGAGTTCATGCTTGTGAAGGATGCAAGGGTTTCTTCCGGA
GAACAATCAGATTGAAGCTTATCTATGACAGATGTGATCTTAACTGTCTGGATCCACAAAAAAGTAGAAATAAATGTCAG
TACTGTCTGGTTTCAGAAATGCCTTGCAGTGGGGATGTCTCATAATGCCATCAGGTTTGGGCGGATGCCACAGGCCGAGAA
GGAGAAGCTGTTGGCGGAGATCTCCAGTGATATCGACCAGCTGAATCCAGAGTCCGCTGACCTCCGGGCCCTGGCAAAAC
ATTTGTATGACTCATACATAAAGTCCTTCCCGCTGACCAAAGCAAAGGCGAGGGCGATCTTGACAGGAAAGACAACAGA
CAAATCACCATTTCGTTATCTATGACATGAATTCCTTAATGATGGGAGAAGATAAAATCAAGTTCAAACACATCACCCCCCT
GCAGGAGCAGAGCAAAGAGGTGGCCATCCGCATCTTTCAGGGCTGCCAGTTTCGCTCCGTGGAGGCTGTGCAGGAGATCA
CAGAGTATGCCAAAAGCATTCTGGTTTTGTAAATCTTGACTTGAACGACCAAGTAACTCTCCTCAAATATGGAGTCCACG
AGATCATTTACACAATGCTGGCCTCCTTGATGAATAAAGATGGGGTTCTCATATCCGAGGGCCAAGGCTTCATGACAAGG
GAGTTTCTAAAGAGCCTGCGAAAGCCTTTTGGTGACTTTATGGAGCCCAAGTTTGAGTTTGCTGTGAAGTTCAATGCACTG
GAATTAGATGACAGCGACTTGGCAATATTTATTGCTGTCATTATTCTCAGTGGAGACCGCCCAGGTTTGCTGAATGTGAAG
CCCATGAAGACATTCAAGACAACCTGCTACAAGCCCTGGAGCTCCAGCTGAAGCTGAACCACCCTGAGTCCTCACAGCT
GTTTGCCAAGCTGCTCCAGAAAATGACAGACCTCAGACAGATTGTACGGAACACGTGCAGCTACTGCAGGTGATCAAGA
AGACGGAGACAGACATGAGTCTTCACCCGCTCCTGCAGGAGATCTACAAGGACTTGATACGGTATGGACTACAAGGATGAC
GATGACAAGGATACAAAGACGACGA

(B) shPPARG

GV248

Vector information:

General: 11468bp

HIV-1_5_LTR, truncHIV-1_3_LTR: 835-1015

psi: 1067-1204

RRE: 1680-1913

ORF frame 1: 1558-2445

hU6Promoter: 2602-2869

me-shid-2: 2938-2961

Ubiquitin Promoter: 2957-4173

EGFP: 4216-4935

IRES: 4945-5529

Puromycin: 5536-6135

WPRE: 6149-6736

HIV-1_5_LTR, truncHIV-1_3_LTR: 7247-7427

pBR322-origin: 10294-9675

AmpR: 11309-10449

AmpR-promoter: 11379-11351

CAG_enhance: 318-605

CMV_immeary_promoter: 239-810

Primer locations and sequences:

H1-F(2479-2502): GGAAAGAATAGTAGACATAATAGC

Ubi-R(3136-3115): ATGTCCTTCTGCTGATACTGGG

Target Seq	GC%
GACCAAGTAACTCTCCTCAA	42.86%

NO.	5'	STEM	Lo op	STEM	3'
pparg1- RNAi(63592-1)- a	Ccgg	GACCAAGTAACTCTCC TCAA	CTCG AG	TTTGAGGAGAGTTAC TTGGTC	TTT TTg
pparg1- RNAi(63592-1)- b	aattcaa aaa	GACCAAGTAACTCTCC TCAA	CTCG AG	TTTGAGGAGAGTTAC TTGGTC	

F_C02.ab1NNNNNNN

AACTAAAGATTACAAAAACAAATTACAAAAATTCAAATTTTCGGGTTTATTACAGGGACAGCAGAGATCCAGTTTGTT
AATTAATCGAGCGGCCGCCCTTCACCGAGGGCCTATTTCCCATGATTCCTTCATATTTGCATATACGATACAAGGCTGT
AGAGAGATAATTGGAATTAATTTGACTGTAAACACAAAGATATTAGTACAAAATACGTGACGTAGAAAGTAATAATTCT
TGGGTAGTTTGAGTTTTTAAAATTATGTTTTTAAAATGGACTATCATATGCTTACCGTAACTTGAAAGTATTTGATTCTTGG
CTTTATATATCTTGTGGAAGGACGAAACACCGGGACCAAGTAACTCTCCTCAAACCTCGAGTTTGAGGAGAGTTACTTGGT
CTTTTTGAATTCTCGACCTCGAGACAAATGGCAGTATTCATCCACGGATCCTAACCCGTGTCGGCTCCAGATCTGGCCTCCG
CGCCGGGTTTTGGCGCCTCCCGCGGGCGCCCCCTCTCACGGCGAGCGCTGCCACGTACAGACGAAGGGCGCAGCGAGCG
TCCTGATCCTTCCGCCCGACGCTCAGGACAGCGGCCCGCTGCTCATAAGACTCGGCCTTAGAACCCAGTATCAGCAGA
AGGACATTTTAGGACGGGACTTGGGTGACTCTAGGGCACTGGTTTTCTTCCAGAGAGCGGAACAGGCGAGGAAAAGTAG
TCCCTTCTCGGCGATTCTGCGGAGGGATCTCCGTGGGGCGGTGAACGCCGATGATTATATAAGGACGCGCCGGGTGTGGC
ACAGCTAGTTCCGTGCGAGCCGGGATTTGGGTGCGCGTTCTTGTGTTGTGGATCGCTGTGATCGTCACTTGGTGAGTAGCGGG
CTGCTGGGCTGGCCGGGGCTTTCGTGGCCGCCGGGCCGCTCGGTGGGACGGAAGCGTGTGGAGAGACCGCCAAGGGCTGT
AGTCTGGGTCCGCGAGCAAGGTTGCCCTGAACTGGGGTTGGGGGGANCGCAGCAAATGNNGCTGTTCCCGAGTCTTGAT
GNNGACGCTTGTGAGCGGGCTGTGAGGTCTGAAACAGGTGGGGGGCATGGTGGGGCGGCAGACCNNNCNTGGAGGCC
TTCGCTAA

PSC63592-1 ccggGACCAAGTAACTCTCCTCAAActcgagTTTGAGGAGAGTTACTTGGTCtttttg

(C) shPPARG+rPPARG SV

The coding sequence of the rPPARG SV was cloned into the LV6 vector with psi-RRE-EF1a-puromycin-WPRE and then co-transfected with shPPARG lentiviruses into KGN cells to produce lentiviruses overexpressing the PPARG SV and weakly expressing normal PPARG.

The upstream and downstream primers of the target gene are respectively added with homologous sequences on both sides of NotI and BamHI on LV6 vector for subcloning of the vector. The primer sequences are as follows:

B4537-1	AGGGTTCCAAGCTTAAGCGGCCGCATTGA
B4537-2	TGAGAAAATGGCCTTGTGTATATTTGTGGTTTAGTGTGGCTTCTTTCAAATGCGGCCGCTTAA
B4537-3	AATATACAACAAGGCCATTTTCTCAAACGAGAGTCAGCCTTTAACGAAATGACCATGGTTGACAC
B4537-4	CCACGGAGCTGATCCCAAAGTTGGTGGGCCAGAATGGCATCTCTGTGTCAACCATGGTCATTTTCG
B4537-5	TGGGATCAGCTCCGTGGATCTCTCCGTAATGGAAGACCACTCCCCTCCTTTGATATCAAGCCCT
B4537-6	TTCGTAATGTGGAGTAGAAATGCTGGAGAAGTCAACAGTAGTGAAGGGCTTGATATCAAAGGAGT
B4537-7	GCATTTCTACTCCACATTACGAAGACATTCCATTACACAAGAACAGATCCAGTGGTTGCAGATTAC
B4537-8	ACTTTGATTGCACTTTGGTACTCTTGAAGTTTCAGGTCATACTTGTAATCTGCAACCACTGGATC
B4537-9	GAGTACCAAAGTGCAATCAAAGTGGAGCCTGCATCTCCACCTTATTATTCTGAGAAGACTCAGCT
B4537-10	CATGAGGGAGTTGGAAGGCTCTTCATGAGGCTTATTGTAGAGCTGAGTCTTCTCAGAATAATAAG
B4537-11	GCCTTCCAACCTCCCTCATGGCAATTGAATGTCGTGTCTGTGGAGATAAAGCTTCTGGATTTCACT
B4537-12	CCGGAAGAAACCCTTGCATCCTTACAAGCATGAACTCCATAGTGAAATCCAGAAGCTTTATCTC
B4537-13	ATGCAAGGGTTTCTTCCGGAGAACAATCAGATTGAAGCTTATCTATGACAGATGTGATCTTAAC
B4537-14	GTACTGACATTTATTTCTACTTTTTTTGTGGATCCGACAGTTAAGATCACATCTGTCATAGATAA
B4537-15	ACAAAAAAGTAGAAATAAATGTCAGTACTGTCGGTTTCAGAAATGCCTTGCAGTGGGGATGTCT
B4537-16	TCTCCTTCTCGGCCTGTGGCATCCGCCCAAACCTGATGGCATTATGAGACATCCCCACTGCAAGG
B4537-17	CACAGGCCGAGAAGGAGAAGCTGTTGGCGGAGATCTCCAGTGATATCGACCAGCTGAATCCAGAG
B4537-18	TGTATGAGTCATACAAATGTTTTGCCAGGGCCCGGAGGTCAGCGGACTCTGGATTCAGCTGGTCG
B4537-19	GCAAAACATTTGTATGACTCATACATAAAGTCCTTCCCGCTGACCAAAGCAAAGGCGAGGGCGAT
B4537-20	CATTACAGCAAACCTGGGCGGTTGATTTGTCTGTTGTCTTTCTGTCAAGATCGCCCTCGCCTTG
B4537-21	GCCCAGTTTGTCTGAATGTGAAGCCATTGAAGACATTCAAGACAACCTGCTACAAGCCCTGGAG
B4537-22	TTGGCAAACAGCTGTGAGGACTCAGGGTGGTTCAGCTTCAGCTGGAGCTCCAGGGCTTGATGACG
B4537-23	CCTCACAGCTGTTTGCCAAGCTGCTCCAGAAAATGACAGACCTCAGACAGATTGTCACGGAACAC
B4537-24	CTCATGTCTGTCTCCGTCTTCTTGATCACCTGCAGTAGCTGCACGTGTTCCGTGACAATCTGTCT
B4537-25	GAAGACGGAGACAGACATGAGTCTTACCCGCTCCTGCAGGAGATCTACAAGGACTTGTACTAGC
B4537-26	ACTGGAAGAAGGGAATGTTGGCAGTGGCTCAGGACTCTCTGCTAGTACAAGTCCTTGATATCT
B4537-27	CCAACATTTCCCTTCTTCCAGTTGCACTATTCTGAGGGAAAATCTGACACCTAAGAAATTTACTG
B4537-28	CATATTCTAAAACCTTTTCTTTTAAAATGCTTTTTCACAGTAAATTTCTTAGGTGTCAGATTTT
B4537-29	GCATTTTAAAAAGAAAAGGTTTTAGAATATGATCTATTTTATGCATATTGTTTATAAAGACACAT
B4537-30	TAATATGGTAATTTTAAATATTAATAAAGTAAATTGTAAATGTGTCTTTATAACAATATGCATAAAA
B4537-31	TTACAATTTACTTTTAATATTAATAAATTACCATATTATGAAATTGCTGATAGTAAAAAAAAAAAAA
B4537-32	ATCAGTAGAGAGTGTGCGATCCTTTTTTTTTTTTTTTTTTACTATCAGCAATTTCA

Then the target gene PPARG SV was cloned into vector LV6.

The insertion sequence is shown as follows.

ATTTGAAAGAAGCCAACACTAAACCACAAATATACAACAAGGCCATTTTCTCAAACGAGAGTCAGCCTTTAACGAAATG
 ACCATGGTTGACACAGAGATGCCATTCTGGCCCACTTGGGATCAGCTCCGTGGATCTCTCCGTAATGGAAGACCAC
 TCCCACTCCTTTGATATCAAGCCCTTCACTACTGTTGACTTCTCCAGCATTCTACTCCACATTACGAAGACATTCCATTCAC
 AAGAACAGATCCAGTGGTTGCAGATTACAAGTATGACCTGAACTTCAAGAGTACCAAAGTGCAATCAAAGTGGAGCCT
 GCATCTCCACCTTATTATTCTGAGAAGACTCAGCTCTACAATAAGCCTCATGAAGAGCCTTCCAACCTCCCTCATGGCAATT

GAATGTCGTGTCTGTGGAGATAAAGCTTCTGGATTTCACTATGGAGTTCATGCTTGTGAAGGATGCAAGGGTTTCTTCCGGA
GAACAATCAGATTGAAGCTTATCTATGACAGATGTGATCTTAACTGTCGGATCCACAAAAAAGTAGAAATAAATGTCAG
TACTGTCGGTTTCAGAAATGCCTTGCAGTGGGGATGTCTCATAATGCCATCAGGTTTGGGCGGATGCCACAGGCCGAGAA
GGAGAAGCTGTTGGCGGAGATCTCCAGTGATATCGACCAGCTGAATCCAGAGTCCGCTGACCTCCGGGCCCTGGCAAAAC
ATTTGTATGACTCATACATAAAGTCCTTCCCGCTGACCAAAGCAAAGGCGAGGGCGATCTTGACAGGAAAGACAACAGA
CAATCAACCGCCAGGTTTGTGAATGTGAAGCCATTGAAGACATTCAAGACAACCTGCTACAAGCCCTGGAGCTCCA
GCTGAAGCTGAACCACCCTGAGTCCTCACAGCTGTTTGCCAAGCTGCTCCAGAAAATGACAGACCTCAGACAGATTGTCA
CGGAACACGTGCAGCTACTGCAGGTGATCAAGAAGACGGAGACAGACATGAGTCTTCACCCGCTCCTGCAGGAGATCTA
CAAGGACTTGTACTAGCAGAGAGTCTGAGCCACTGCCAACATTTCCCTTCTTCAGTTGCACTATTCTGAGGGAAAATCT
GACACCTAAGAAATTTACTGTGAAAAAGCATTTTAAAAAAGAAAGGTTTTAGAATATGATCTATTTTATGCATATTGTTTA
TAAAGACACATTTACAATTTACTTTTAATATTAATAAATTACCATATTATGAAATTGCTGATAGTAAAAAAAAAAAAAAAAAA
AA

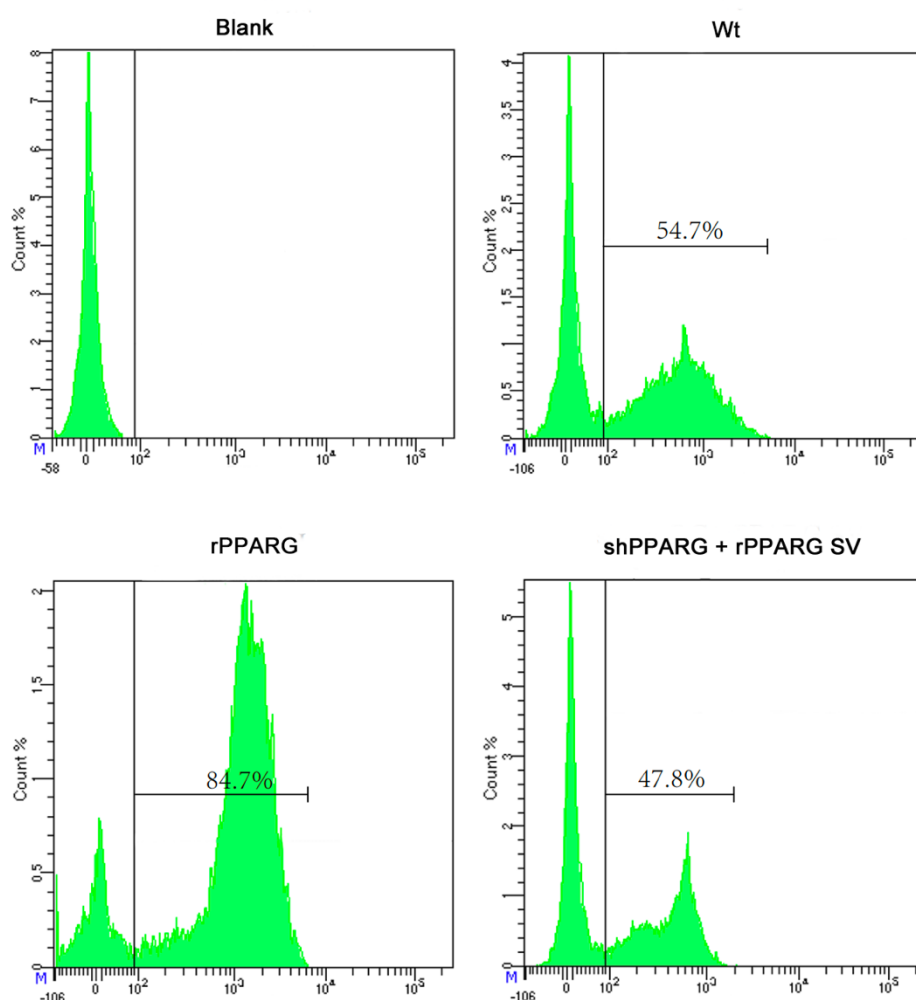


Figure S2. The apoptosis ratio of KGN cells treated with different lentivirus in each group was detected by flow cytometry using TUNEL staining. The figure shows the apoptosis rate decreased following the transfection of PPARG SV.

Table S1. The primers for PCR.

Category	target sequence	specific primer	sequence (5' to 3')
Primers for SMARTer RACE	full length of PPARG	SMARTer RACE 3'RT primer-1	AAG GGA AAT GTT GGC AGT GG
		SMARTer RACE 3'RT primer-2	GAT CTC CTG CTG CAG GAG CGG GTG
		SMARTer RACE 3'RT primer-3	CTG TCT CCG TCT TCT TGA TCA CCT GC
		SMARTer RACE3'RT primer-4	GTG CAA CTG GAA GAA CTC TCT GCT AG
Primers for qRT PCR	PPARG exon5	PPARG-ex5-F-1	ACA TAA AGT CCT TCC CGC TG
		PPARG-ex5-R-1	AGC AGG TTG TCT TGA ATG TCT
	PPARG exon5 del	PPARG ex5 Del qPCR Primer1 F	CGA GAA GGA GAA GCT GTT GG
		PPARG ex5 Del qPCR Primer1 R	GCG GTT GAT TTG TCT GTT GT
	ACTB	ACTB-F	AGC GAG CAT CCC CCA AAG TT
		ACTB-R	GGG CAC GAA GGC TCA TCA TT
	PPARG exon1	PPARG-ex1-F-1	ACA AGG CCA TTT TCT CAA AC
		PPARG-ex1-R-1	TAA GGT GGA GAT GCA GGC TC
		PPARG-ex1-F-2	ACC ACA AAT ATA CAA CAA GGC CA
		PPARG-ex1-R-2	CAG GCT CCA CTT TGA TTG CA
	PPARG exon2	PPARG-ex2-F-1	TCT CCA GCA TTT CTA CTC CAC A
		PPARG-ex2-R-1	GTG GAT CCG ACA GTT AAG ATC AC
		PPARG-ex2-F-2	TCA AGC CCT TCA CTA CTG TTG
		PPARG-ex2-R-2	TGA AAC CGA CAG TAC TGA CAT TT
	PPARG exon3	PPARG-ex3-F-1	TGA ATG TCG TGT CTG TGG AGA
		PPARG-ex3-R-1	AGC TGG TCG ATA TCA CTG GAG
		PPARG-ex3-F-2	GTC GTG TCT GTG GAG ATA AAG C
		PPARG-ex3-R-2	GGA TTC AGC TGG TCG ATA TCA C
Primers for PCR	PPARG exon4	PPARG-ex3-F-3	CCA ACT CCC TCA TGG CAA TT
		PPARG-ex3-R-3	CAA CAG CTT CTC CTT CTC GG
		PPARG-ex4-F	GTG ATC TTA ACT GTC GGA TCC AC
		PPARG-ex4-R	GGG GTG ATG TGT TTG AAC TTG A
	PPARG exon5	PPARG-ex5-F-1	ACA TAA AGT CCT TCC CGC TG
		PPARG-ex5-R-1	AGC AGG TTG TCT TGA ATG TCT
		PPARG-ex5-F-2	ACT CAT ACA TAA AGT CCT TCC CG
		PPARG-ex5-R-2	CTT GTA GCA GGT TGT CTT GAA TG
	PPARG EXON6	PPARG-ex6-F-1	TGC ACT GGA ATT AGA TGA CAG C
		PPARG-ex6-R-1	TGG AAG AAG GGA AAT GTT GGC
		PPARG-ex6-F-2	ACT GGA ATT AGA TGA CAG CGA C
		PPARG-ex6-R-2	CCC TCA GAA TAG TGC AAC TGG

Table S2. The antibodies for Western Blot.

Antibody	Dilution ratio	Company	Code No.
ACTB	1:5000	Proteintech	HRP-66009
Caspase-3 Antibody	1:1000	CST	9662
Caspase-8 (D35G2) Rabbit mAb	1:1000	CST	4790
Caspase-9 (C9) Mouse mAb	1:1000	CST	9508