Graphical_abstracts

Supplementary File 1. The sequences of primers. Supplementary

Name	Primer	Sequence (5'-3')	Size (bp)
β-actin	Forward	CACGATGGAGGGGCCGGACTCATC	240
	Reverse	TAAAGACCTCTATGCCAACACAGT	
RPL23a	Forward	TGCTATCATCAAATTCCCAC	192
	Reverse	ACATACGCCTTCTTCTCTCC	
p53	Forward	GGACAGCTTTGAGGTTCGTG	237
	Reverse	TCATTCAGCTCCCGGAACAT	
MDM2	Forward	CGGTGGAACTTTGACTTCGT	212
	Reverse	AGAGTGCAAGACAGCGACAA	
P21	Forward	CTTCGTGAGAACTGGCTTCC	225
	Reverse	CGATGGTTGGGAATAGTCGT	

Supplementary File 2. The sequences of RPL11 using three different siRNAs

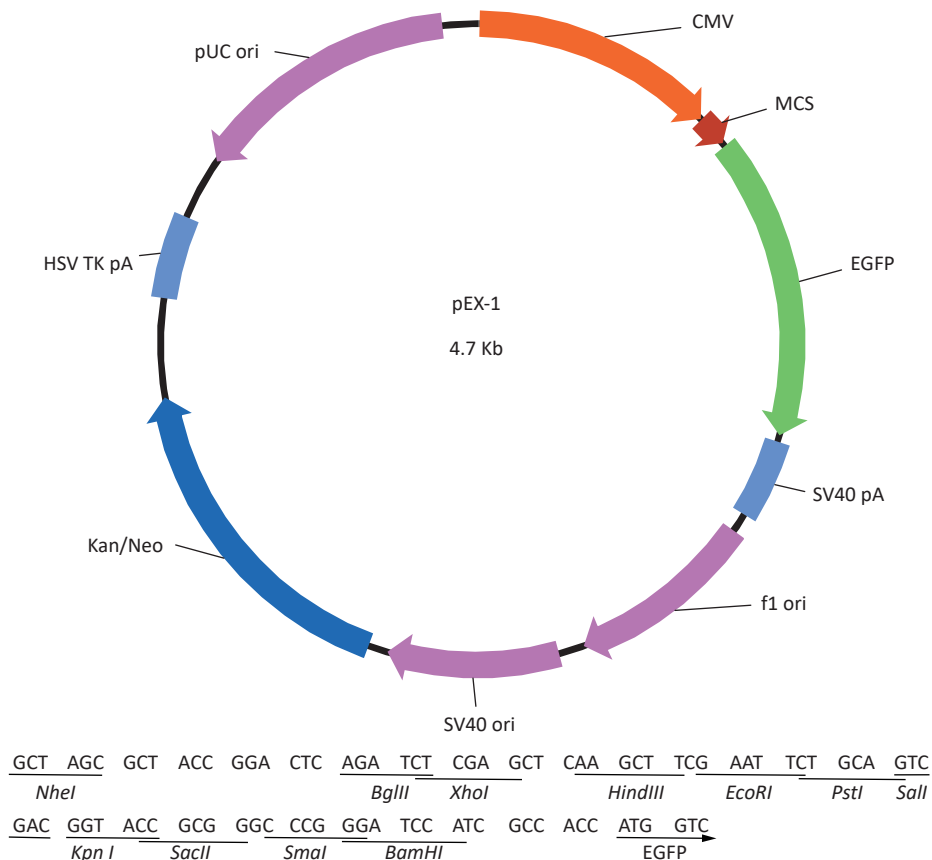| Gene	Sequence	
	Sense (5'-3')	Antisense (5'-3')
Rpl23a-mus-47	GCCGAAAGCGAAGAAGGAATT	UUCCUUCUUCGCUUUCGGCTT
Rpl23a-mus-352	CCAAUAAGCAUCAGAUCAATT	UUGAUCUGAUGCUUAUUGGTT
Rpl23a-mus-455	UCGCUUGGCUCCUGAUUAUTT	AUAAUCAGGAGCCAAGCGATT

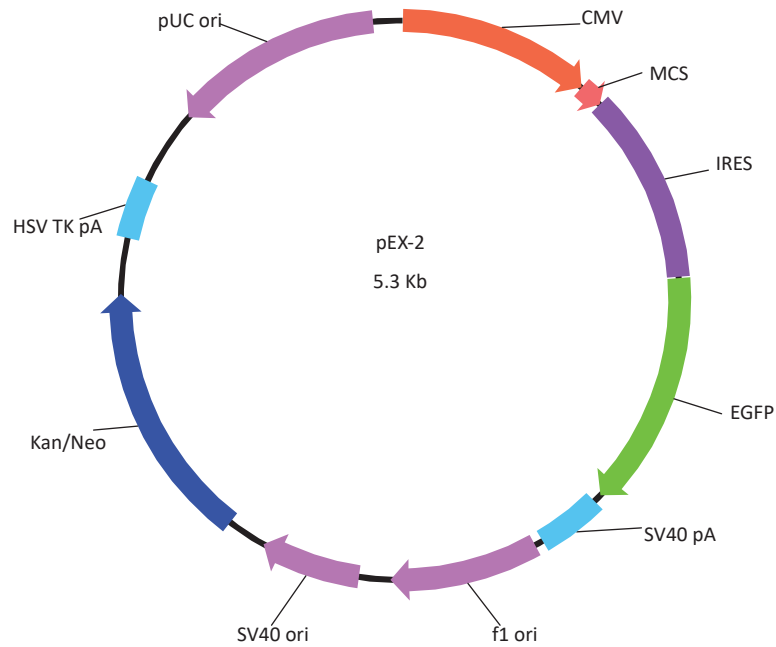|	Wiltype	NC	47	352	455
Mus b-actin	16.753	16.388	16.059	16.036	16.380
	16.406	16.408	16.071	16.048	16.324
	16.752	16.597	16.019	16.065	16.269
Mus RPL23a	14.257	13.951	14.930	14.855	15.313
	14.061	13.953	14.894	14.836	15.307
	14.069	13.801	14.970	14.911	15.303
Δt	−2.496	−2.437	−1.130	−1.181	−1.067
	−2.345	−2.455	−1.176	−1.212	−1.017
	−2.683	−2.796	−1.048	−1.153	−0.966
ΔΔt	0.000	0.058	1.336	1.315	1.428
	0.000	−0.110	1.169	1.133	1.328
	0.000	−0.113	1.635	1.530	1.718
2-ΔΔt	1.000	0.960	0.388	0.402	0.372
	1.000	1.080	0.445	0.456	0.389
	1.000	1.081	0.322	0.346	0.304
mean	1.000	1.040	0.385	0.401	0.358
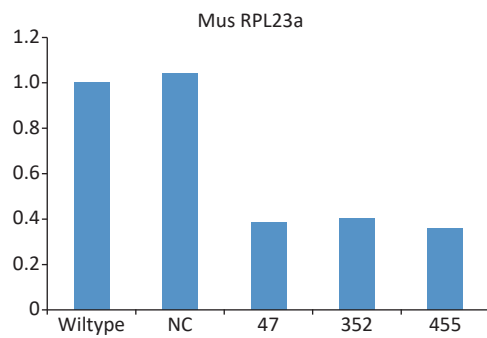
Supplementary File 3. The efficiency of knockdown of the RPL23a siRNAs.

Catalog Number	Product Name	Promoter	Fluorescent tags	Eukaryotic resistance	Prokaryotic resistance
C05001	pEX-1 (pGCMV/MCS/EGFP/Neo)	CMV	EGFP	Neo	Kan
C05002	pEX-2 (pGCMV/MCS/IRES/EGFP/Neo)	CMV	EGFP	Neo	Kan
C05003	pEX-3 (pGCMV/MCS/Neo)	CMV	--	Neo	Kan
C05004	pEX-4 (pGCMV/MCS/T2A/EGFP/Neo)	CMV	EGFP	Neo	Kan
C05005	pEX-5 (pGCMV/EGFP/MCS/Neo)	CMV	EGFP	Neo	Kan
C05006	pEX-6 (pGCMV/MCS/RFP/Neo)	CMV	RFP	Neo	Kan
C05007	pEX-7 (pGCMV/RFP/MCS/Neo)	CMV	RFP	Neo	Kan

Features	Benefit
CMV promoter	Permits high-level, constitutive expression of the gene of interest
EGFP/RFP	Allows visual detection of transfected mammalian cells using fluorescence microscopy
IRES	Allows for translation initiation in the middle of a mRNA sequence
T2A	Allows a cotranslational cleavage event resulting in the release of each individual protein product
Neo	Permits selection of stably transfected mammalian cell lines
Kana	Allows selection of the plasmid in E.coli

GCT AGC GCT ACC GGA CTC AGA TCT CGA GCT CAA GCT TCG AAT TCT GCA GTC
NheI   *BglII*   *XhoI*   *HindIII*   *EcoRI*   *PstI*   *SalI*

GAC GGT ACC GCG GGC CCG GGA TCC ATC GCC ACC ATG GTC
KpnI   *SacII*   *SmaI*   *BamHI*   *EGFP*

pEX-2
5.3 Kb

GCT	AGC	GCT	ACC	GGA	CTC	AGA	TCT	CGA	GCT	CAA	GCT	TCG	AAT	TCT	GCA	GTC
NheI						*BglII*		*XhoI*	*SacI*				*EcoRI*		*PstI*	*SalI*

GAC	GGT	ACC	GCG	GGC	CCG	GGA	TCC
			SacII		*SmaI*	*BamHI*	

pEX-3
4.0 Kb

GCT	AGC	GCT	ACC	GGA	CTC	AGA	TCT	CGA	GCT	CAA	GCT	TCG	AAT	TCT	GCA	GTC
NheI						*BglII*		*XhoI*			*HindIII*		*EcoRI*		*PstI*	*SalI*

GAC	GGT	ACC	GCG	GGC	CCG	GGA	TCC	ATC	ACC	GGT	ATC	GGC	GCG	CCA	TTG	ATA
	Kpn I		*SacII*		*SmaI*	*BamH I*			*AgeI*			*AscI*				*EcoRV*

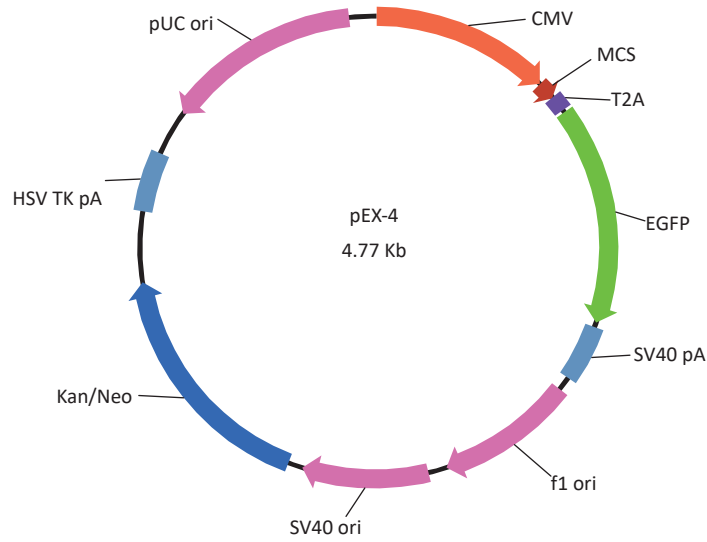| TCA	ATG	CGG	CCG	C
		NotI		

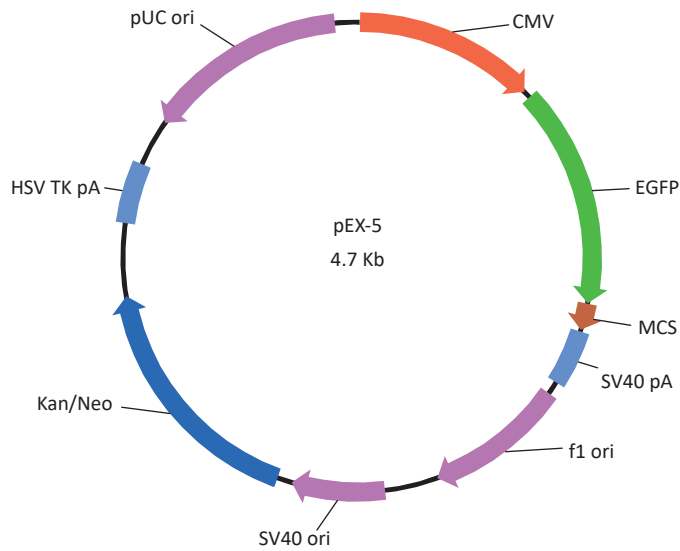<u>GCT</u> <u>AGC</u> GCT ACC GGA CTC <u>AGA</u> <u>TCT</u> CGA GCT <u>CAA</u> <u>GCT</u> TCG AAT <u>TCT</u> GCA <u>GTC</u>
     NheI   *BglII*   *XhoI*   *HindIII*   *EcoRI*   *PstI*   *SalI*

<u>GAC</u> <u>GGT</u> <u>ACC</u> *GAG* *GGC* *AGA* *GGA* *AGT* *CTT* *CTA* *ACA* *TGC* *GGT* *GAC* *GTG* *GAG* *GAG* *AAT*
      Kpn I

CCC *GGC* *CCT* GGA TCC ATC GCC ACC <u>ATG</u> <u>GTC</u>
                                      EGFP


EGFP
<u>TAC</u> <u>AAG</u> <u>TAC</u> TCA GAT CTC GAG CTC <u>AAG</u> <u>CTT</u> CGA ATT CTG CAG TCG ACG GTA
       SacI   *BglII*   *XhoI*   *SacI*   *HindIII*   *EcoRI*   *PstI*   *SalI*   *Kpn I*

<u>CCG</u> <u>CGG</u> <u>GCC</u> <u>CGG</u> <u>GAT</u> CCA CCG GAT <u>CTA</u> <u>GAT</u> AAC TGA TCA
   SacII   *SmaI* *BamHI*   *XbaI*

GCT	AGC	GCT	ACC	GGA	CTC	AGA	TCT	CGA	GCT	CAA	GCT	TCG	AAT	TCT	GCA	GTC
NheI						*BglII*	*XhoI*				*HindIII*		*EcoRI*		*PstI*	*SalI*

GAC	GGT	ACC	GCG	GGC	CCG	GGA	TCC	ATC	GCC	ACC	ATG	GTC
Kpn I		*SacII*			*SmaI*	*BamHI*					*RFP*	

RFP →

TTC	CTG	TAC	TCA	GAT	CTC	GAG	CTC	AAG	CTT	CGA	ATT	CTG	CAG	TCG	ACG	GTA
				BglII	*XhoI*		*SacI*	*HindIII*		*EcoRI*				*SalI*		*Kpn I*

CCG	CGG	GCC	CGG	GAT	CCA	CCG	GAT	CTA	GAT	AAC	TGA	TCA
SacII		*SmaI*	*BamHI*					*XbaI*				
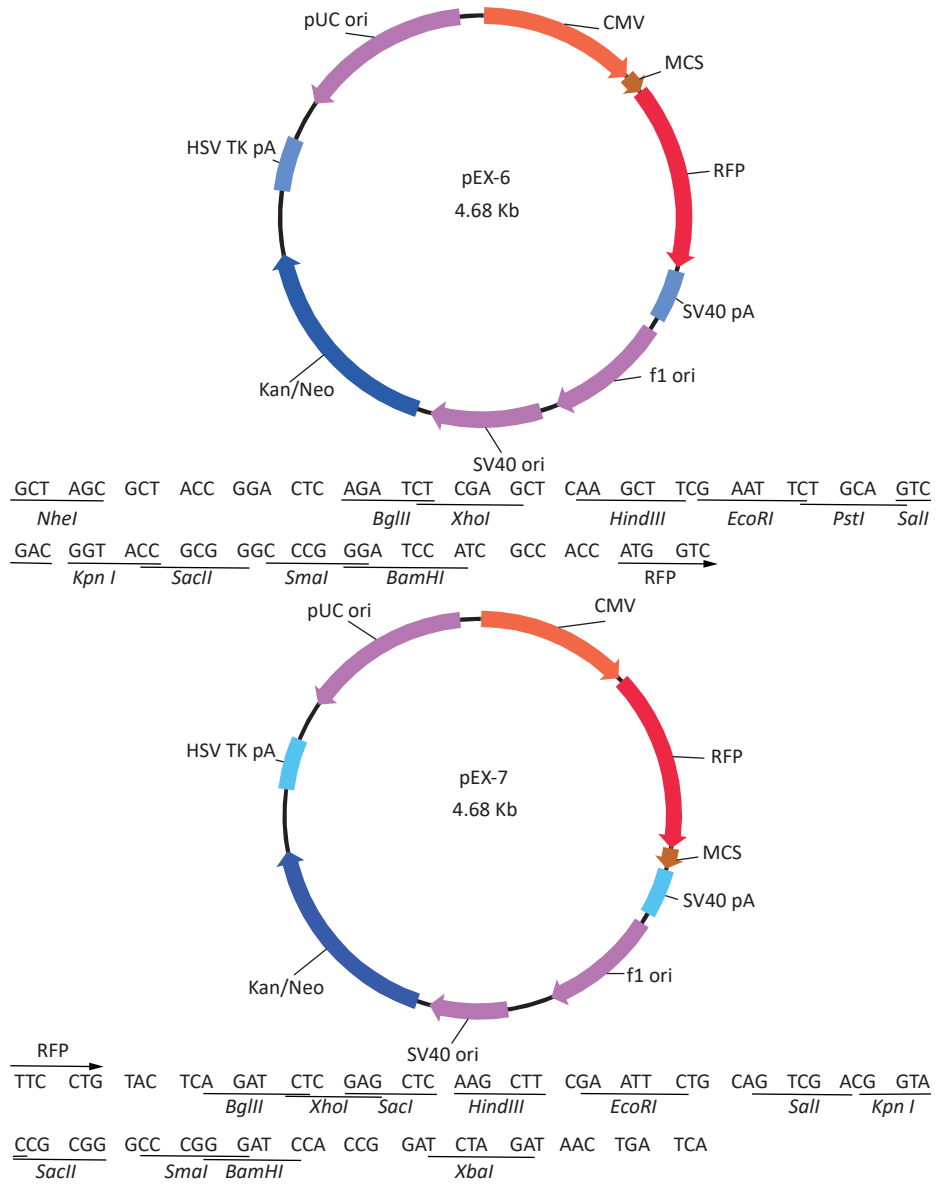
Supplementary File 4. The overexpression plasmid of RPL23a.