

Supplemental Table S1. Chimera Switch Points

Plasmid	Nucleotide Position	Nucleotide sequence	Amino Acid Position	Translation
pPL268				
5' switch				
TOR1	NA	NA	NA	NA
TOR2	3HA	3HA	3HA-N	N-term
Result				
3'switch				
TOR1	2812	atccaagc <u>gattat</u> gcatat ttt	938	IQAIM <u>M</u> HIF
TOR2	2836	attcaagct <u>attat</u> gcatat ttt	946	IQAI <u>M</u> HIF
Result		attcaagctattatgcatat ttt		IQAIMHIF
pPL172				
5' switch				
TOR1	301	gatctactag <u>ttat</u> ccttgaattg	101	DLLV <u>S</u> LEL
TOR2	340	actactttgac <u>ctc</u> attagcaagg	114	TTLT <u>S</u> LAR
Result		gatctactagtctcattagcaagg		DLLVSLAR
3'switch				
TOR1	5290	tttgaagtaat <u>atc</u> atggttcag	1764	FEVIS <u>M</u> VQ
TOR2	5308	tttgaagtc <u>attt</u> ctatgctaaca	1770	FEVI <u>S</u> MLT
Result		tttgaagtcattccatggttcag		FEVISMVQ
pPL271				
5' switch				
TOR1	301	gatctactag <u>ttat</u> ccttgaattg	101	DLLV <u>S</u> LEL
TOR2	340	actactttgac <u>ctc</u> attagcaagg	114	TTLT <u>S</u> LAR
Result		gatctactagtctcattagcaagg		DLLVSLAR
3'switch				
TOR1	2812	atccaagc <u>gattat</u> gcatat ttt	938	IQAIM <u>M</u> HIF
TOR2	2836	attcaagct <u>attat</u> gcatat ttt	946	IQAI <u>M</u> HIF
Result		attcaagctattatgcatat ttt		IQAIMHIF
pPL273				

5' switch				
TOR1	1252	attgcatatgaagtcgggcccgat	418	IAYE <u>V</u> GPD
TOR2	1282	gatattgcatttgaagttggttcg	428	IAFE <u>V</u> GSS
Result		attgcatatgaagttggttcgagc		IAYE <u>V</u> GSS
3'switch				
TOR1	2812	atccaagcgattatgcatatttt	938	IQAI <u>M</u> HIF
TOR2	2836	attcaagctattatgcatatttt	946	IQAI <u>M</u> HIF
Result		attcaagctattatgcatatttt		IQAI <u>M</u> HIF
pPL175				
5' switch				
TOR1	1738	agcagatttcggttggaattc	580	SRF <u>S</u> LVEF
TOR2	1768	catcaatattccttgacggagttt	590	HQY <u>S</u> LTEF
Result		agcagatttcggttgacggagttt		SRF <u>S</u> LTEF
3'switch				
TOR1	2812	atccaagcgattatgcatatttt	938	IQAI <u>M</u> HIF
TOR2	2836	attcaagctattatgcatatttt	946	IQAI <u>M</u> HIF
Result		attcaagctattatgcatatttt		IQAI <u>M</u> HIF
pPL176				
5' switch				
TOR1	2014	aatttgagactctgtttactgca	672	NLRL <u>L</u> FTA
TOR2	2044	aatttacgctacttttcatggcg	682	NLRL <u>L</u> FMA
Result		aatttgagactccttttcatggcg		NLRL <u>L</u> FMA
3'switch				
TOR1	2812	atccaagcgattatgcatatttt	938	IQAI <u>M</u> HIF
TOR2	2836	attcaagctattatgcatatttt	946	IQAI <u>M</u> HIF
Result		attcaagctattatgcatatttt		IQAI <u>M</u> HIF
pPL212				
5' switch				
TOR1	2014	aatttgagactctgtttactgca	672	NLRL <u>L</u> FTA
TOR2	2044	aatttacgctacttttcatggcg	682	NLRL <u>L</u> FMA
Result		aatttgagactccttttcatggcg		NLRL <u>L</u> FMA

3'switch				
TOR1	3688	caacaaagaact <u>aa</u> agaagattgg	1230	QQR <u>T</u> KEDW
TOR2	3706	caacagaagac <u>ca</u> aaagaagattgg	1236	QQK <u>T</u> KEDW
Result		caacagaagac <u>ca</u> aaagaagattgg		QQK <u>T</u> KEDW
pPL180				
5' switch				
TOR1	3025	gttgctaagct <u>a</u> caataacgctt	1009	VAK <u>L</u> QITL
TOR2	3055	atcattaaact <u>a</u> caatcacaatt	1019	I <u>I</u> KLQITI
Result		gttgctaagct <u>a</u> caatcacaatt		VAK <u>L</u> QITI
3'switch				
TOR1	5290	tttgaagtaata <u>t</u> ccatggttcag	1764	FEV <u>I</u> SMVQ
TOR2	5308	tttgaagtcatt <u>t</u> ctatgctaaca	1770	FEV <u>I</u> SMLT
Result		tttgaagtcatt <u>t</u> ccatggttcag		FEV <u>I</u> SMVQ
pPL184				
5' switch				
TOR1	3025	gttgctaagct <u>a</u> caataacgctt	1009	VAK <u>L</u> QITL
TOR2	3055	atcattaaact <u>a</u> caatcacaatt	1019	I <u>I</u> KLQITI
Result		gttgctaagct <u>a</u> caatcacaatt		VAK <u>L</u> QITI
3'switch				
TOR1	4606	aatagagcatat <u>a</u> gcgttattgtt	1536	NRAY <u>S</u> VIV
TOR2	4624	aatagagcat <u>a</u> tataatgttattgtt	1542	NRAY <u>N</u> VVV
Result		aatagagcatat <u>a</u> gcgttattgtt		NRAY <u>S</u> VIV
pPL185				
5' switch				
TOR1	3685	caacaaagaact <u>aa</u> agaagattgg	1229	QQR <u>T</u> KEDW
TOR2	3709	caacagaagac <u>ca</u> aaagaagattgg	1237	QQK <u>T</u> KEDW
Result		caacaaagaact <u>aa</u> agaagattgg		QQR <u>T</u> KEDW
3'switch				
TOR1	5290	tttgaagtaata <u>t</u> ccatggttcag	1764	FEV <u>I</u> SMVQ
TOR2	5308	tttgaagtcatt <u>t</u> ctatgctaaca	1770	FEV <u>I</u> SMLT
Result		tttgaagtcatt <u>t</u> ccatggttcag		FEV <u>I</u> SMVQ

pPL209				
5' switch				
TOR1	4174	cattcacttcaattaaaggagaca	1392	HSLQLKET
TOR2	4198	aatgaattgcagctgaaggaaact	1400	NELQLKET
Result		cattcacttcaactgaaggaaact		HSLQLKET
3'switch				
TOR1	5290	tttgaagtaatatccatgggtcag	1764	FEVISMVQ
TOR2	5308	tttgaagtcatttctatgctaaca	1770	FEVISM L T
Result		tttgaagtcatttccatgggtcag		FEVISMVQ
pPL214		Switch points are the same as for 273 and 184 together.		
pPL321		Entirely <i>TOR2</i> sequence (with endogenous Promoter and Terminator) in pPL130 backbone		
pPL333				
5' switch				
TOR1	1246	attggtgatattgcatatgaagtc	416	IGDIA Y EV
TOR2	1270	ataggtgatattgcat t gaagtt	424	IGDIA F EV
Result		ataggtgatattgcatatgaagtc		IGDIA Y EV
3'switch				
TOR1	2815	gcgattatgcatat t tttcaaacc	939	AIMHIF Q T
TOR2	2845	gctattatgcatat t tttcaaacc	949	AIMHIF Q N
Result		gcgattatgcatat t tttcaaacc		AIMHIF Q N
pPL270				
5' switch				
TOR1	NA	NA	NA	NA
TOR2	3HA	3HA	3HA-N	N-term
Result				
3'switch				
TOR1	1246	attgcatatgaagtcgggcccgat	416	I A YEVGPD
TOR2	1270	attgcat t gaagttggttcgagc	424	I A F E VGSS
Result		attgcatatgaagttggttcgagc		I A YEVGSS
pPL173				

5' switch				
TOR1	1252	attgcatatgaagtcgggcccgat	418	IAYE <u>V</u> GP <u>D</u>
TOR2	1282	gatattgcatttgaagttggttcg	428	IAFE <u>V</u> GSS
Result		attgcatatgaagttggttcgagc		IAYE <u>V</u> GSS
3'switch				
TOR1	2017	aatttgagactctgtttactgca	673	NLRLL <u>F</u> TA
TOR2	2041	aatttacgcctactttcatggcg	N-681	NLRLL <u>F</u> MA
Result		aatttacgcctattgtttactgca		NLRLL <u>F</u> TA
pPL177				
5' switch				
TOR1	2329	actataggtgagctatctgttgta	777	TIGEL <u>S</u> VV
TOR2	2359	gttttgggtgaactatctgttggt	787	VLGEL <u>S</u> VV
Result		actataggtgagctatctgttggt		TIGEL <u>S</u> VV
3'switch				
TOR1	2812	atccaagcgattatgcatatttt	938	IQAIM <u>H</u> IF
TOR2	2836	attcaagctattatgcatatttt	946	IQAIM <u>H</u> IF
Result		attcaagctattatgcatatttt		IQAIM <u>H</u> IF
pPL183				
5' switch				
TOR1	3025	gttgctaagctacaaataacgctt	1009	VAKL <u>Q</u> ITL
TOR2	3055	atcattaaactacaaatcacaatt	1019	IIKL <u>Q</u> ITI
Result		gttgctaagctacaaatcacaatt		VAKL <u>Q</u> ITI
3'switch				
TOR1	4177	cattcaactcaattaaaggagaca	1393	HSL <u>Q</u> LKET
TOR2	4195	aatgaattgcagctgaaggaaact	1399	NEL <u>Q</u> LKET
Result		aatgaattgcagctgaaggaaact		NEL <u>Q</u> LKET
pPL182				
5' switch				
TOR1	3025	gttgctaagctacaaataacgctt	1009	VAKL <u>Q</u> ITL
TOR2	3055	atcattaaactacaaatcacaatt	1019	IIKL <u>Q</u> ITI
Result		gttgctaagctacaaatcacaatt		VAKL <u>Q</u> ITI

3'switch				
TOR1	3688	caacaagaactaaagaagattgg	1230	QQRTKEDW
TOR2	3706	caacagaagaccaagaagattgg	1236	QQKTKEDW
Result		caacagaagaccaagaagattgg		QQKTKEDW
pPL186				
5' switch				
TOR1	4603	aatagagcatatagcgttattggt	1535	NRAYSVIV
TOR2	4627	aatagagcatataatggtggtggt	1543	NRAYNVVV
Result		aatagagcatataatggtggtggt		NRAYNVVV
3'switch				
TOR1	5290	tttgaagtaatatcatggttcag	1764	FEVISMVQ
TOR2	5308	tttgaagtcatttctatgctaaca	1770	FEVISMLT
Result		tttgaagtcatttccatggttcag		FEVISMVQ