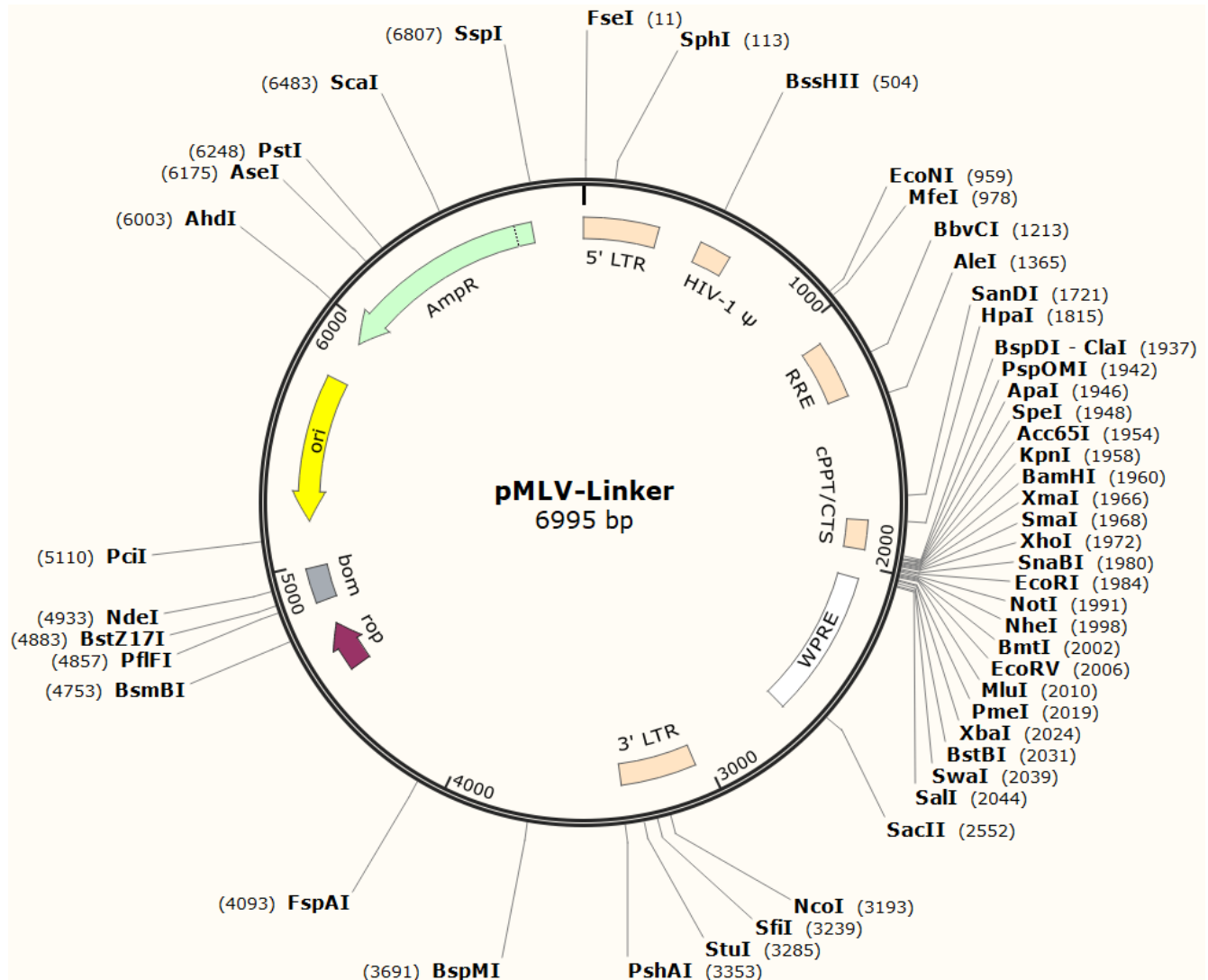


**Vector:** pMLV-Linker (MOLab optimized Lentiviral Vector w/ a super linker; 3<sup>rd</sup> generation)

**Antibiotic Selection:** Amp

**Creator(s):** Originally constructed by Yi Shu & Alex Li; modified by Chengfu Yuan @ Molecular Oncology Laboratory at The University of Chicago Medical Center

**Date of Construction:** August, 2017; updated December 12, 2017



## pMLV-Linker Full-Length Sequence

GAATTGGCCCGCCACTACCGCGTGTAGTCTTATGCAATACTCTTGTAGTCTTGC AACATGGTAACGATGAGTTAGCAACATG  
CCTTACAAGGAGAGAAAAAGCACCGTGCATGCCGATTGGTGAAAGTAAGGTGGTACGATCGTGCCTTATTAGGAAGGCAACA  
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 TATCAGAGGCCCTTTCGTCTTCAA

## Zero Cutters

#	Enzyme	Specificity	12	Bsu36I	CCTNAGG
1	AgeI	ACCGGT	13	CspCI	NN (N) 11CAA (N) 5GTGG (N) 10NN
2	AscI	GGCGCGCC	14	DraIII	CACNNNGTG
3	AsiSI	GCGATCGC	15	NsiI	ATGCAT
4	AvrII	CCTAGG	16	PacI	TTAATTAA
5	BclI	TGATCA	17	PmlI	CACGTG
6	BlpI	GCTNAGC	18	RsrII	CGGWCCG
7	BmgBI	CACGTC	19	SbfI	CCTGCAGG
8	BsiWI	CGTACG	20	SexAI	ACCWGGT
9	BsrGI	TGTACA	21	SgrAI	CRCCGGYG
10	BstEII	GGTNACC	22	SrfI	GCCCCGGC
11	BstXI	CCANNNNNNTGG	23	XcmI	CCANNNNNNNNTGG

## One/Single-Cutters

#	Enzyme	Specificity	Sites & flanks	Cut positions (blunt - 5' ext. - 3' ext.)
1	Acc65I	G GTAC.C	<a href="#">list</a>	*1954/1958
2	AhdI	GACNN.N NNGTC	<a href="#">list</a>	6003/6002
3	AleI	CACNN.NNGTG	<a href="#">list</a>	1365

4	<b>ApaI</b>	G <sub>↓</sub> GGCC C	<a href="#">list</a>	1946/1942
5	<b>AseI</b>	AT TA <sub>↓</sub> AT	<a href="#">list</a>	6175/6177
6	<b>BaeI</b>	↓(N) <sub>5</sub> (N) <sub>10</sub> ACNNNNGTAYC(N) <sub>7</sub> ↓(N) <sub>5</sub>	<a href="#">list</a>	126/121+159/154
7	<b>BamHI</b>	G GATC <sub>↓</sub> C	<a href="#">list</a>	1960/1964
8	<b>BbvCI</b>	CC TCA <sub>↓</sub> GC	<a href="#">list</a>	1213/1216
9	<b>BfuAI</b>	ACCTGCNNNN NNNN <sub>↓</sub>	<a href="#">list</a>	3691/3695
10	<b>BmtI</b>	G <sub>↓</sub> CTAG C	<a href="#">list</a>	2002/1998
11	<b>BsaXI</b>	↓NNN (N) <sub>9</sub> AC(N) <sub>5</sub> CTCC(N) <sub>7</sub> ↓NNN	<a href="#">list</a>	1605/1602+1635/1632
12	<b>BsmBI</b>	CGTCTCN NNNN <sub>↓</sub>	<a href="#">list</a>	*4753/4757
13	<b>BspDI</b>	AT CG <sub>↓</sub> AT	<a href="#">list</a>	*1937/1939
14	<b>BspEI</b>	T CCGG <sub>↓</sub> A	<a href="#">list</a>	*#4301/4305
15	<b>BspMI</b>	ACCTGCNNNN NNNN <sub>↓</sub>	<a href="#">list</a>	3691/3695
16	<b>BssHII</b>	G CGCG <sub>↓</sub> C	<a href="#">list</a>	*504/508
17	<b>BstBI</b>	TT CG <sub>↓</sub> AA	<a href="#">list</a>	*2031/2033
18	<b>BstZ17I</b>	GTA <sub>↓</sub> TAC	<a href="#">list</a>	4883
19	<b>Clal</b>	AT CG <sub>↓</sub> AT	<a href="#">list</a>	*1937/1939
20	<b>EcoNI</b>	CCTNN N <sub>↓</sub> NNAGG	<a href="#">list</a>	959/960
21	<b>EcoRI</b>	G AATT <sub>↓</sub> C	<a href="#">list</a>	*1984/1988
22	<b>EcoRV</b>	GAT <sub>↓</sub> ATC	<a href="#">list</a>	2006
23	<b>FseI</b>	GG <sub>↓</sub> CCGG CC	<a href="#">list</a>	*11/7
24	<b>HpaI</b>	GTT <sub>↓</sub> AAC	<a href="#">list</a>	1815
25	<b>KpnI</b>	G <sub>↓</sub> GTAC C	<a href="#">list</a>	1958/1954
26	<b>MfeI</b>	C AATT <sub>↓</sub> G	<a href="#">list</a>	978/982
27	<b>MluI</b>	A CGCG <sub>↓</sub> T	<a href="#">list</a>	*2010/2014
28	<b>MscI</b>	TGG <sub>↓</sub> CCA	<a href="#">list</a>	#4083
29	<b>NcoI</b>	C CATG <sub>↓</sub> G	<a href="#">list</a>	3193/3197
30	<b>NdeI</b>	CA TA <sub>↓</sub> TG	<a href="#">list</a>	4933/4935
31	<b>NheI</b>	G CTAG <sub>↓</sub> C	<a href="#">list</a>	*1998/2002
32	<b>NotI</b>	GC GGCC <sub>↓</sub> GC	<a href="#">list</a>	*1991/1995
33	<b>PaeR7I</b>	C TCGA <sub>↓</sub> G	<a href="#">list</a>	*1972/1976
34	<b>PciI</b>	A CATG <sub>↓</sub> T	<a href="#">list</a>	5110/5114
35	<b>PfiFI</b>	GACN N <sub>↓</sub> NGTC	<a href="#">list</a>	4857/4858
36	<b>PmeI</b>	GTTT <sub>↓</sub> AAAC	<a href="#">list</a>	2019
37	<b>PshAI</b>	GACNN <sub>↓</sub> NNGTC	<a href="#">list</a>	*3353
38	<b>PspOMI</b>	G GGCC <sub>↓</sub> C	<a href="#">list</a>	1942/1946
39	<b>PspXI</b>	VC TCGA <sub>↓</sub> GB	<a href="#">list</a>	*1972/1976
40	<b>PstI</b>	C <sub>↓</sub> TGCA G	<a href="#">list</a>	6248/6244
41	<b>SacII</b>	CC <sub>↓</sub> GC GG	<a href="#">list</a>	*2552/2550
42	<b>Sall</b>	G TCGA <sub>↓</sub> C	<a href="#">list</a>	*2044/2048
43	<b>ScaI</b>	AGT <sub>↓</sub> ACT	<a href="#">list</a>	6483
44	<b>SfiI</b>	GGCCN <sub>↓</sub> NNN NGGCC	<a href="#">list</a>	*3239/3236
45	<b>SmaI</b>	CCC <sub>↓</sub> GGG	<a href="#">list</a>	*1968
46	<b>SnaBI</b>	TAC <sub>↓</sub> GTA	<a href="#">list</a>	*1980
47	<b>SpeI</b>	A CTAG <sub>↓</sub> T	<a href="#">list</a>	1948/1952
48	<b>SphI</b>	G <sub>↓</sub> CATG C	<a href="#">list</a>	113/109

49	SspI	AAT↓ATT	<a href="#">list</a>	6807
50	StuI	AGG↓CCT	<a href="#">list</a>	3285
51	SwaI	ATTT↓AAAT	<a href="#">list</a>	2039
52	TspMI	C↓CCGG↓G	<a href="#">list</a>	*1966/1970
53	Tth111I	GACN↓N↓NGTC	<a href="#">list</a>	4857/4858
54	XbaI	T↓CTAG↓A	<a href="#">list</a>	2024/2028
55	XhoI	C↓TCGA↓G	<a href="#">list</a>	*1972/1976
56	XmaI	C↓CCGG↓G	<a href="#">list</a>	*1966/1970