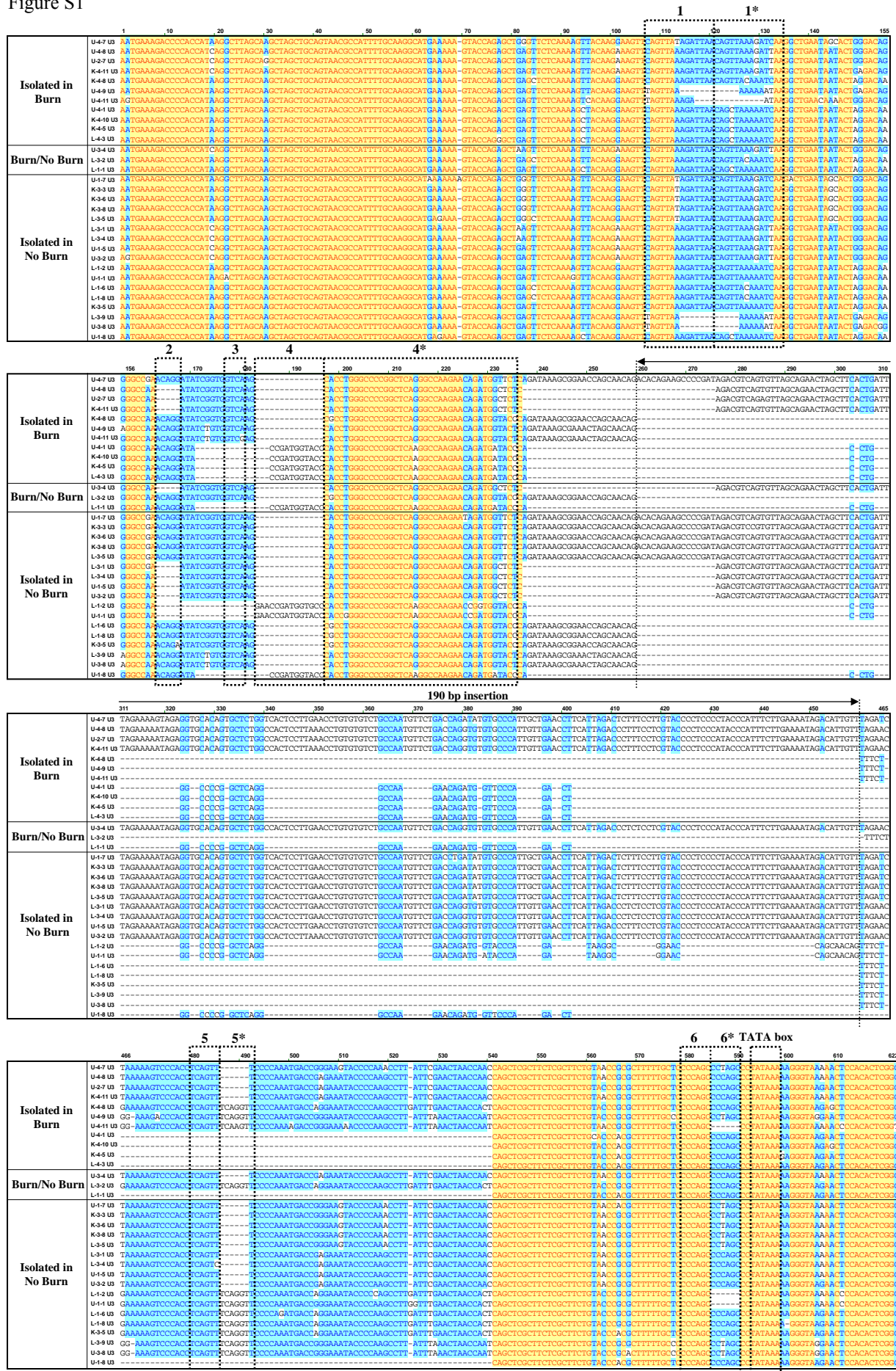


Figure S1





**Table S2. Neighboring host genes within 110 kb upstream and downstream of integration sites of individual putative MuERVs**

Ch <sup>a</sup>	Virus	Gene	Or <sup>**</sup>	Description	Ch <sup>a</sup>	Virus	Gene	Or <sup>**</sup>	Description	
1	K4-11.1a	<u>Selp</u>	(+/+)	selectin, platelet	9	L-1-2.8a	<u>Zfp42</u>	(-/-)	zinc finger protein 42	
		<u>E5</u>	(+/+)	coagulation factor V			L-1-2.8b	<u>Asna1</u>	(-/-)	arsA arsenite transporter, ATP-binding, homolog 1
		<u>S1C19a2</u>	(+/+)	solute carrier family 19 (thiamine transporter), member 2		<u>Tnpo2</u>		(-/-)	transportin 2 (import 3, karyopherin beta 2b)	
		<u>Nme7</u>	(+/+)	non-metastatic cells 7		<u>Fbxw9</u>	(-/-)	F-box and WD-40 domain protein 9		
		<u>Blzfl</u>	(+/-)	basic leucine zipper nuclear factor 1		<u>Dhps</u>	(-/-)	deoxyhypusine synthase		
	K-4-11.1b	<u>Nek2</u>	(+/+)	never in mitosis gene a -related expressed kinase 2		<u>Man2b1</u>	(-/-)	mannosidase 2, alpha B1		
		<u>Slc30a1</u>	(+/+)	solute carrier family 30 (zinc transporter), member 1		<u>Olfr371</u>	(-/-)	olfactory receptor 371		
	U-4-8.1 <sup>c</sup>	<u>Degs1</u>	(+/-)	degenerative spermatocyte homolog 1		10	L-1-2.9	<u>Sorl1</u>	(-/-)	sortilin-related receptor, LDLR class A repeats-containing
		<u>Fbxo28</u>	(+/-)	F-box protein 28				K-3-3.10a	<u>Vip</u>	(-/-)
	U-4-11.1 <sup>c</sup>	<u>Dusp12</u>	(+/+)	dual specificity phosphatase 12		<u>Rgs17</u>	(-/+)		regulator of G-protein signaling 17	
		<u>Fcgr3a</u>	(+/+)	Fc receptor, IgG, low affinity IIIa		<u>Fbxo5</u>	(-/+)		F-box protein 5	
		<u>Fcgr2b_3</u>	(+/-)	Fc receptor, IgG, low affinity IIb, III		<u>Mtrf1l</u>	(-/+)		mitochondrial translational release factor 1-like	
		<u>Fcrl a_b</u>	(+/-)	Fc receptor like a, b		K-3-3.10b	<u>Slc2a12</u>		(+/+)	solute carrier family 2, member 12
		<u>Atf6</u>	(+/-)	activating transcription factor 6			<u>Tbpl1</u>	(-/+)	TATA box binding protein-like 1	
	2	K-4-11.2	<u>Nr4a2</u>	(-/-)		nuclear receptor subfamily 4, group A, member 2	<u>Tcf21</u>	(+/-)	transcription factor 21	
			<u>Gpd2</u>	(-/+)		glycerol phosphate dehydrogenase 2, mitochondrial	K-4-11.10a	<u>Ust</u>	(-/-)	uronyl-2-sulfotransferase
	3	K-3-3.3b	<u>Fubp1</u>	(+/+)		far upstream element (FUSE) binding protein 1		K-4-11.10b	<u>Zbtb24</u>	(+/+)
			<u>Usp33</u>	(+/+)		ubiquitin specific peptidase 33	<u>Mical1</u>		(+/+)	microtubule associated monooxygenase
			<u>Zzz3</u>	(+/+)		zinc finger, ZZ domain containing 3	<u>Cd164</u>	(+/+)	CD164 antigen	
4	L-1-1.4 <sup>a</sup>	<u>Egr</u>	(+/+)	gardner-rasheed feline sarcoma viral oncogene homolog	<u>Smpd2</u>	(+/+)	sphingomyelin phosphodiesterase 2			
		<u>Ahdcl</u>	(+/+)	AT hook, DNA binding motif, containing 1	K-3-3.11a	<u>Drg2</u>	(-/+)	developmentally regulated GTP binding protein 2		
		<u>Wasf2</u>	(+/+)	WAS protein family, member 2		<u>Myo15</u>	(-/+)	myosin XV		
	K-3-6.4 <sup>b</sup>	<u>Efcabp1</u>	(-/-)	EF hand calcium binding protein 1	<u>Alkbh5</u>	(-/+)	alkB, alkylation repair homolog 5 (E.coli)			
		<u>Tmem64</u>	(-/+)	transmembrane protein 64	K-3-3.11c	<u>Dhx40</u>	(+/-)	DEAH (Asp-Glu-Ala-His) box polypeptide 40		
	K-3-3.4	<u>Ankrd6</u>	(-/-)	ankyrin repeat domain 6		<u>Ypel2</u>	(+/-)	Yippee-like 2 (Drosophila)		
		K-4-11.4a	<u>Lepr</u>	(-/+)	leptine receptor	K-4-11.11b	<u>Akap1</u>	(-/-)	A kinase (PRKA) anchor protein 1	
	K-4-11.4b		<u>Scp2</u>	(-/-)	sterol carrier protein 2, liver		<u>Scpep1</u>	(-/-)	serine carboxypeptidase 1	
		5	K-3-3.5b	<u>Echdc2</u>	(-/+)	enoyl coenzyme A hydratase domain containing 2	<u>Coil</u>	(-/+)	coilin	
	<u>Cpeb2</u>			(+/+)	cytoplasmic polyadenylation element binding protein 2	<u>Trim25</u>	(-/+)	tripartite motif protein 25		
K-3-3.5a	<u>Mvl2</u>		(+/+)	myosin, light polypeptide 2	K-3-6.12 <sup>b</sup>	<u>Ctse</u>	(+/+)	cathepsin E		
	<u>Ppp1cc</u>		(+/+)	protein phosphatase 1, catalytic subunit, gamma isoform		<u>Sos2</u>	(-/+)	son of sevenless homolog 2 (Drosophila)		
U-1-5.5a <sup>b</sup>	<u>Hvcn1</u>		(+/+)	hydrogen voltage-gated channel 1	13	K-3-3.13	<u>Hist1h2ai</u>	(+/+)	histone 1, H2ai	
	<u>Pptc7</u>		(+/+)	PTC7 protein phosphatase homolog (S. cerevisiae)			<u>Hist1h2ab</u>	(+/+)	histone 1, H2ab	
	<u>Ccdc63</u>		(+/-)	coiled-coil domain containing 63			<u>Hist1h2bb</u>	(+/+)	histone 1, H2bb	
U-1-5.5b <sup>b</sup>	<u>Prom1</u>		(+/-)	prominin 1			<u>Hist1h2bc</u>	(+/+)	histone 1, H2bc	
	<u>Srp72</u>		(+/+)	signal recognition particle 72			<u>Hist1h2bf</u>	(+/+)	histone 1, H2bf	
U-4-8.5 <sup>c</sup>	<u>Arl9</u>		(+/+)	ADP-ribosylation factor-like 9			<u>Hist1h2bm</u>	(+/+)	histone 1, H2bm	
	<u>Paics</u>		(+/+)	phosphoribosylaminoimidazole carboxylase			<u>Hist1h3g</u>	(+/+)	histone 1, H3g	
	<u>Ppat</u>		(+/-)	phosphoribosyl pyrophosphate amidotransferase			<u>Hist1h4a</u>	(+/+)	histone 1, H4a	
	<u>Trrap</u>		(+/-)	transformation/transcription domain-associated protein			<u>Olfr1359</u>	(+/+)	olfactory receptor 1359	
	<u>Tmem130</u>	(+/-)	transmembrane protein 130	K-3-5.13			<u>Zfp712</u>	(-/+)	zinc finger protein 712	
L-3-9.5 <sup>b</sup>	<u>Srpk2</u>	(-/-)	serine/arginine-rich protein specific kinase 2		K-4-11.13	<u>Tnpo1</u>	(-/-)	transportin 1		
	<u>Pus7</u>	(-/-)	psedouridylylate synthase 7 homolog (S. cerevisiae)	<u>Rpl27a</u>		(-/+)	ribosomal protein L27a			
	<u>Rint1</u>	(-/-)	RAD50 interactor 1	14	L-1-2.14	<u>Mrp152</u>	(+/+)	mitochondrial ribosomal protein L52		
6	K-3-6.6 <sup>b</sup>	<u>Sucgl1</u>	(-/+)			succinate-CoA ligase, GDP-forming, alpha subunit	<u>Mmp14</u>	(+/+)	matrix metalloproteinase 14 (membrane-inserted)	
		7	K-3-6.7 <sup>b</sup>			<u>Trpm1</u>	(+/+)	transient receptor potential cation channel, subfamily M	<u>Lrp10</u>	(+/+)
K-4-11.7a	<u>Usp29</u>					(-/+)	ubiquitin specific peptidase 29	<u>Rem2</u>	(+/+)	rad and gem related GTP binding protein 2
	K-4-11.7c	<u>Zfp418</u>	(-/+)			zinc finger protein 418	<u>Cdh24</u>	(+/+)	cadherin-like 24	
<u>Atp4a</u>		(+/+)	ATPase, H+/K+ exchanging, gastric, alpha polypeptide			<u>Prmt5</u>	(+/-)	protein arginine N-methyltransferase 5		
<u>Krt1dap</u>		(+/+)	keratinocyte differentiation associated protein			<u>Jub</u>	(-/+)	ajuba		
<u>Sbsn</u>		(+/+)	suprabasin			<u>Psmb5</u>	(+/-)	proteasome subunit beta type 5 precursor		
<u>Wbp7</u>		(+/-)	WW domain binding protein 7			<u>Acin1</u>	(-/+)	apoptotic chromatin condensation inducer 1		
<u>Zbtb32</u>		(+/-)	zinc finger and BTB domain containing 32			15	U-1-5.15 <sup>b</sup>	<u>Bop1</u>	(-/-)	block of proliferation 1
<u>Upk1a</u>		(+/-)	uroplakin 1A	<u>Nfkbil2</u>	(-/-)			nuclear factor of kappa light peptide gene enhancer in B cells inhibitor-like 2		
K-4-11.7d		<u>Cox6b1</u>	(+/-)	cytochrome c oxidase, subunit VIb polypeptide 1	<u>Slc39a4</u>	(-/-)	solute carrier family 39 (zinc transporter), member 4			
		<u>Etv2</u>	(+/-)	ets variant gene 2	<u>Dgat1</u>	(-/-)	diacylglycerol O-acyltransferase 1			
		<u>Tmem147</u>	(+/-)	transmembrane protein 147	<u>Scrt1</u>	(-/-)	scratch homolog 1, zinc finger protein (Drosophila)			
		<u>Gapdhs</u>	(+/-)	glyceraldehyde-3-phosphate dehydrogenase	<u>Fbxl6</u>	(-/-)	F-box and leucine-rich repeat protein 6			
		<u>Nucb2</u>	(+/+)	nucleobindin 2	<u>Cpsfl</u>	(-/-)	cleavage and polyadenylation specific factor 1			
	<u>Pik3c2a</u>	(+/-)	phosphatidylinositol 3-kinase, C2 domain, alpha polypeptide	<u>Vps28</u>	(-/-)	vacuolar protein sorting 28 (yeast)				
	8	K-3-6.8 <sup>b</sup>	<u>Rpl13</u>	(+/+)	ribosomal protein L13	<u>Foxh1</u>	(-/-)	forkhead box H1		
			<u>Dpep1</u>	(+/+)	dipeptidase 1 (renal)	<u>Cyhr1</u>	(-/-)	cysteine and histidine rich -1		
		<u>Cdk10</u>	(+/+)	cyclin-dependent kinase (CDC2-like) 10	<u>Scx</u>	(-/+)	scleraxis			
		<u>Zfp276</u>	(+/+)	zinc finger protein (C2H2 type) 276	<u>Hsf1</u>	(-/+)	heat shock factor 1			
<u>Spg7</u>		(+/+)	spastic paraplegia 7 homolog (human)	<u>GPR172b</u>	(-/+)	G protein-coupled receptor 172B				
<u>Fanca</u>		(+/-)	fanconi anemia, complementation group A	<u>Adck5</u>	(-/+)	aarF domain containing kinase 5				
<u>Sult5a1</u>		(+/-)	sulfotransferase family 5A, member 1	<u>Ppp1r16a</u>	(-/+)	protein phosphatase 1, regulatory (inhibitor)				
<u>Peoln3</u>		(+/-)	procollagen (type III) N-endopeptidase	18	U-4-8.18 <sup>c</sup>	<u>Mbp</u>	(+/+)	myelin basic protein		
<u>Cot1l</u>		(-/-)	coactosin-like 1 (Dictyostelium)			<u>Zfp236</u>	(+/-)	zinc finger protein 236		
U-3-4.8 <sup>a</sup>		<u>Usp10</u>	(-/+)	ubiquitin specific peptidase 10	19	K-4-11.19	<u>Lgil</u>	(+/+)	leucine-rich repeat LGI family, member 1	
		<u>Crispld2</u>	(+/-)	cysteine-rich secretory protein LCCL domain containing 2			<u>Tmem20</u>	(+/+)	transmembrane protein 20	

Putative MuERVs isolated with 100% homology with respective U3 probes: <sup>a</sup> Isolated in Burn/No Burn, <sup>b</sup> Isolated in No Burn, and <sup>c</sup> Isolated in Burn. \*chromosome \*\* orientation (virus/gene)