

Supplementary Table S1. Degenerate primers for amplification of BALF2 and BALF4 sequences

Primer-set abbreviation	Targeted gene	Name of primer*	Sequence (5'-3')
BALF2A	BALF2	2944-s	TTCCCGGGGATCTGAT(n/i)AC(n/i)TAYGC
		2944-as	TTTGTCCAGGAAGTAGGTT(n/i)CTRTC(n/i)AC
		2945-s	ACTGTCCCAGCTAGGGA(n/i)TAYCC(n/i)CA
		2945-as	CTGTCTACCCACCTACCCATRAARTA(n/i)CC
BALF2B	BALF2	3055-s	ACA ACTACCACAAAGT(n/i)CT(n/i)TTyCC
		3058-as	GACCTGCAGCAGGTTyCTrTC(n/i)AC
		3056-s	TCTGTGGCATAATTTyC(n/i)AGG
		3057-as	CACCCCGGCCATrAArTA(n/i)CC
BALF4A	BALF4	2753-s	CCATCCAGATCCArTwyGC(n/i)TAyGA
		2756-as	TGGCTGCCAAGCG(n/i)(n/i)T(n/i)GG(n/i)GA
		2754-s	GATGTTCTGCGCCTGRWARTTRTAYTC
		2755-as	GATGTTCTGCGCCTRRWARTTRTA
BALF4B	BALF4	3033-s	CATCGCCAG(S)GC(S)TGGTGC
		3036-as	TCGGCCGAAAC(R)GTCTT(R)A(M)GTG
		3034-s	GGAGCAGCGCAG(N/I)CA(R)AA(Y)ATGGT
		3035-as	CTTCCCCGACAG(R)AAGTAGT(R)CTG
BALF4C	BALF4	3951-s	AGGGCACGGCyAGyTT(y/i)GT
		3951-as	GCCTCTGGTCCwGGCACCA
		3952-s	CGGAGGATTGTTTrTTrGC(n/i)TGG
		3952-as	GCGCAACATCTGGTTrAT(y/i)TG

I=Inosine.

*s, Sense; as, antisense.

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Supplementary Table S2. Viruses and GenBank accession numbers for gB tree of 58 viruses (Fig. 2a)

Viruses	GenBank accession numbers
<i>Alphaherpesvirinae</i>	
Bovine herpesvirus 1	NC_001847
Bovine herpesvirus 5	NC_005261
Equine herpesvirus 1	NC_001491
Equine herpesvirus 4	NC_001844
Fibropapilloma-associated turtle herpesvirus	AY644454
Herpes simplex virus 1	NC_001806
Herpes simplex virus 2	NC_001798
Herpesvirus papio 2	NC_007653
Herpesvirus of turkeys	NC_002641
Infectious laryngotracheitis virus	NC_006623
Marek's disease virus 1	NC_002229
Marek's disease virus 2	NC_002577
Psittacine herpesvirus	NC_005264
Pseudorabies virus	NC_006151
Simian agent 8	NC_006560
Simian B virus	NC_004812
Simian varicella virus	NC_002686
Varicella-zoster virus	NC_001348
<i>Betaherpesvirinae</i>	
Aotine cytomegalovirus	FJ483970
Chimpanzee cytomegalovirus	NC_003521
Colburn cytomegalovirus	FJ483969
Guinea pig cytomegalovirus	NC_011587
Human cytomegalovirus	NC_006273

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Human herpesvirus 6	NC_001664
Human herpesvirus 7	NC_001716
Murine cytomegalovirus	NC_004065
Rat cytomegalovirus	NC_002512
Rhesus cytomegalovirus	NC_006150
Simian cytomegalovirus	FJ483968
Squirrel monkey cytomegalovirus	FJ483967
Tupaia herpesvirus	NC_002794
<i>Gammaherpesvirinae</i> (gamma-1)	
Callitrichine herpesvirus 3	GenBank acc. no. in Table 2
Cercopithecine herpesvirus 12	"
Cercopithecine herpesvirus 15	"
Epstein–Barr virus	"
GgorLCV-1	"
GgorLCV-2	"
HlarLCV-1	"
PhamLCV-2	"
PpanLCV-1	"
PpitLCV-1	"
PpygLCV-1	"
PpygLCV-2	"
PtroLCV-1	"
SsciLCV-2	"
SsynLCV-1	"
<i>Gammaherpesvirinae</i> (gamma-2)	
Alcelaphine herpesvirus 1	NC_002531
Bovine herpesvirus 4	NC_002665

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Equine herpesvirus 2	NC_001650
Human herpesvirus 8	NC_003409
Herpesvirus ateles	NC_001987
Herpesvirus saimiri	NC_001350
M. fuscata rhadinovirus 1	AY528864
M. mulatta (Rhesus) rhadinovirus 26-95	AF210726
M. mulatta (Rhesus) rhadinovirus 17577	AF083501
Murine herpesvirus 68	NC_001826
Ovine herpesvirus 2	NC_007646
Porcine lymphotropic herpesvirus 1	AF478169

Supplementary Table S3. Gamma-2 viruses and GenBank accession numbers used for outgroup to tree of Fig. 2(b)

Viruses	GenBank accession numbers
G. gorilla rhadinovirus 1	AY177144
Human herpesvirus 8	GenBank accession no. in Supplementary Table S2
Herpesvirus ateles	"
Herpesvirus saimiri	"
M. fascicularis rhadinovirus 1	AY138583
M. fascicularis rhadinovirus 2	EU085377
M. fuscata rhadinovirus 1	GenBank accession no. in Supplementary Table S2
M. mulatta (Rhesus) rhadinovirus 26-95	"
P. troglodytes rhadinovirus 1	AY138585
P. troglodytes rhadinovirus 2	EU085378
S. sciureus gammaherpesvirus 2	AY138584

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