SUPPLEMENTARY DATA

TABLE S1.

LOCATIONS AND SAMPING DATES OF EV VARIANTS

Collection site	Pos. /tested	Type (number of samples)	Collection date
CPOV	22/23	SA5 (1), Type 1 (5), Type 2 (2)	11/2007
	11/12	3336 (1), Type 4 (1), Type 5 (1)	05/2008
CPML	2/3	Not determined	12/2007
	52/55	Type 1 (9), Type 5 (7)	02/2008
DJ	9/9	Type 3 (1), H1 (4)	04/2009
LM	6/6	Type 4 (1), B110 (3)	11/2006
CPGR	2/2	Not determined	11/2011
	2/2	Type 2 (1)	01/2012
GR	1/1	Type 2 (1)	03/2007
EK	1/1	Type 2 (1)	06/2010
CPMV	1/1	Not determined	12/2011

TABLE S2.

SCREEN RESULTS AND GENBANK ACCESSION NUMBERS

Sample Code	Host species	Collection Site	Site code	Collection Date	5'NCR	VP4	VP4 Acc.No.	VP1 Acc.No.	CG Acc.No.
1962	*Mandrillus sphinx*	Lomie	LM	27/11/2006	+	+	KJ420646	KJ420744	
1963	*Mandrillus sphinx*	Lomie	LM	27/11/2006	+	+	KJ420648	KJ420737	
1964	*Mandrillus sphinx*	Lomie	LM	27/11/2006	+	-			
1965	*Mandrillus sphinx*	Lomie	LM	27/11/2006	+	+	KJ420649	KJ420738	
1966	*Mandrillus sphinx*	Lomie	LM	27/11/2006	+	+	KJ420645	KJ420739	
2807	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420654	KJ420718	
2808	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420655		
2809	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420656		
2811	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420658	KJ420720	
2798	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	-			
2799	*Mandrillus sphinx*	Campo Oveng	CP-OV	12/11/2007	+	+	KJ420650		
2801	*Cercocebus torquatus*	Campo Oveng	CP-OV	09/11/2007	+	-			
2803	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420651		
2804	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420652	KJ420746	
2805	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420653	KJ420726	
2810	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420657	KJ420721	
2812	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420659		
2813	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420660		
2814	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420661		
2815	*Mandrillus sphinx*	Gribi	GR	28/03/2007	+	+			KJ420747
2896	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420662		
2898	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420663		
2899	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420664		
2900	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420665		
2902	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420666	KJ420727	
2903	*Mandrillus sphinx*	Campo Oveng	CP-OV	02/05/2008	+	+	KJ420672	KJ420740	
2904	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420667		
2906	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	-			
2907	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420668	KJ420719	
2908	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420669	KJ420728	
2909	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420670		
2910	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420671		

2911	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	-				
3330	*Mandrillus sphinx*	Campo Oveng	CP-OV	30/04/2008	-				
3333	*Mandrillus sphinx*	Campo Oveng	CP-OV	23/05/2008	+	+	KJ420673		
3334	*Mandrillus sphinx*	Campo Oveng	CP-OV	23/05/2008	+	+	KJ420674	KJ420745	
3335	*Mandrillus sphinx*	Campo Oveng	CP-OV	23/05/2008	+	-			
3336	*Mandrillus sphinx*	Campo Oveng	CP-OV	23/05/2008	+	+	KJ420675	KJ420743	
3337	*Mandrillus sphinx*	Campo Oveng	CP-OV	23/05/2008	+	+	KJ420676		
3338	*Cercocebus torquatus*	Campo Oveng	CP-OV	28/05/2008	+	-			
3339	*Cercocebus torquatus*	Campo Oveng	CP-OV	28/05/2008	+	-			
3340	*Cercocebus torquatus*	Campo Oveng	CP-OV	28/05/2008	+	+	KJ420677		
3341	*Cercocebus torquatus*	Campo Oveng	CP-OV	28/05/2008	+	-			
3342	*Cercocebus torquatus*	Campo Oveng	CP-OV	28/05/2008	+	+	KJ420678		
3343	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420679		
3344	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420680	KJ420732	
3345	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420626	KJ420729	
3346	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420681		
3347	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420682		
3348	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	NA	KJ420722	
3349	*Mandrillus sphinx*	Campo Oveng	CP-OV	11/11/2007	+	+	KJ420625		
3350	*Cercopithecus cephus*	Campo Melen	CP-ML	15/12/2007	+	+	KJ420684		
3351	*Mandrillus sphinx*	Campo Oveng	CP-OV	12/11/2007	+	+	KJ420683		
3356	*Cercopithecus cephus*	Campo Melen	CP-ML	15/12/2007	-				
3357	*Mandrillus sphinx*	Campo Melen	CP-ML	15/12/2007	+	+	KJ420685		
3958	*Cercopithecus cephus*	Campo Melen	CP-ML	03/02/2008	-				
3959	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420686		
3960	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420687		
3961	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+			KJ420748
3962	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420626	KJ420741	
1961	*Mandrillus sphinx*	Lomie	LM	27/11/2006	+	-			
3957	*Cercopithecus cephus*	Campo Melen	CP-ML	03/02/2008	+	+	KJ420688		
4136	*Mandrillus sphinx*	Djoum	DJ	04/04/2009	+	-			
4137	*Mandrillus sphinx*	Djoum	DJ	04/04/2009	+	+	KJ420692		
4138	*Mandrillus sphinx*	Djoum	DJ	04/04/2009	+	+	KJ420693		
4139	*Mandrillus sphinx*	Djoum	DJ	04/04/2009	+	+	KJ420694		
4140	*Mandrillus sphinx*	Djoum	DJ	09/04/2009	+	+		KJ420723	
4141	*Mandrillus sphinx*	Djoum	DJ	09/04/2009	+	+	KJ420689	KJ420733	
4142	*Mandrillus sphinx*	Djoum	DJ	09/04/2009	+	+	KJ420690	KJ420734	
4143	*Mandrillus sphinx*	Djoum	DJ	09/04/2009	+	+	KJ420691	KJ420735	
4144	*Mandrillus sphinx*	Djoum	DJ	09/04/2009	+	+	KJ420695	KJ420736	

5879	*Mandrillus sphinx*	Ekom	EK	05/06/2010	+	+	KJ420628	KJ420742	
8096	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420633		
7033	*Mandrillus sphinx*	Campo Grottes	CP-GR	26/11/2011	+	+	KJ420629	KJ420711	
7034	*Mandrillus sphinx*	Campo Grottes	CP-GR	26/11/2011	+	-			
7120	*Mandrillus sphinx*	Campo Mvini	CP-MV	09/12/2011	+	+	KJ420696		
7921	*Mandrillus sphinx*	Campo Grottes	CP-GR	26/01/2012	+	+	KJ420630		
7922	*Mandrillus sphinx*	Campo Grottes	CP-GR	26/01/2012	+	+	KJ420697		
8090	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420698		
8091	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	-			
8092	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420699		
8093	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420631		
8094	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420632		
8095	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	NA	KJ420713	
8097	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	NA	KJ420714	
8098	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420634	KJ420724	
8099	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420700		
8100	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420635		
8101	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420701		
8102	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420702		
8103	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420703		
8104	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420704		
8105	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420636		
8106	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420637		
8107	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	NA	KJ420715	
8108	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420638	KJ420712	
8109	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+			KJ420749
8110	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420705		
8111	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420706	KJ420730	
8112	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	-			
8113	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420639		
8114	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420707		
8115	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420708		
8116	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420709		
8117	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420640		
8118	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420641	KJ420731	
8119	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420642		
8120	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+		KJ420716	
8121	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420643	KJ420717	
8122	*Mandrillus sphinx*	Campo Melen	CP-ML	04/02/2008	+	+	KJ420644	KJ420725	

8124	*Mandrillus sphinx*	Campo Melen	04/02/2008	+	-	
8125	*Mandrillus sphinx*	Campo Melen	04/02/2008	+	+	KJ420647
8127	*Cercocebus torquatus*	Campo Melen	04/02/2008	+	+	KJ420710

TABLE S3 -PRIMER SEQUENCES

A) Screening and typing of EVs.

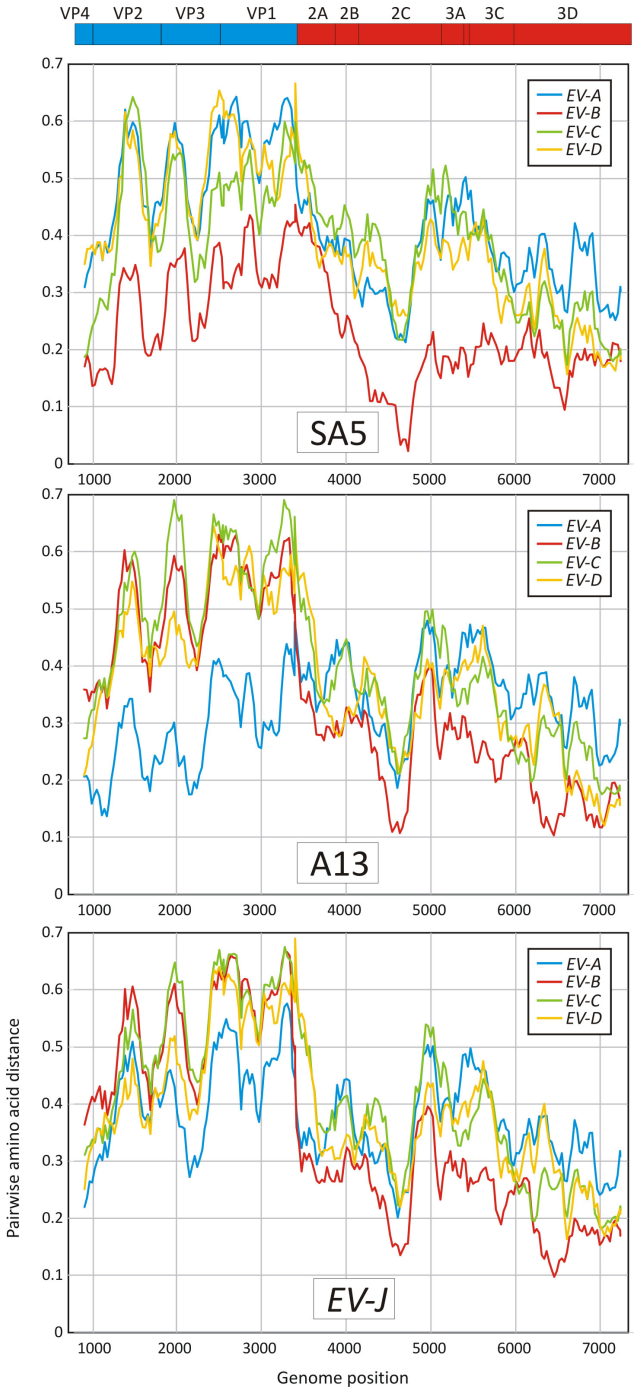
Primer name[1]	**Sequence**	**Reference**
HEV_5'UTR_309s	TGTAGHTYWGGTCGATGAGTC	Wisdom et al. (2009)
HEV_5'UTR_563ias	ACACCCAAAGTAGTYGGTYCCR	
HEV_5'UTR_573oas	RGAAACACGGACACCCAAAGTAGT	
HRV/HEV_VP4_458os	CCGGCCCCTGAATGYGGCTAA	Wisdom et al. (2009)
HRV/HEV_VP4_547is	ACCRACTACTTTGGGTGTCCGTG	
HRV/HEV_VP4_1087ias	TCWGGHARYTTCCAMCACCANCC	
or HEVA_VP4_1178ias	TCNGGRAAYTTCCARTACCANCC	
or HEVB_VP4_1178ias	TCNGGNARYTTCCACCACCANCC	
HRV/HEV_VP4_1125oas	ACATRTTYTSNCCAAANAYDCCCAT	
SA5_VP1_2265os	GTNCCNTGGATYAGYCARACMCAYTA	Harvala et al. (2011)
SA5_VP1_2325is	GGNTAYATTACNTGYTGGTAYCARAC	
SA5_VP1_3016ias	CTGGGRTTNGTDGANGAYTGCCA	
SA5_VP1_3043oas	GGNGCRTTNCCYTCNGTCCARAA	
SA5_VP1_2994os	TGGCARTCNTCNACNAAYCCCAG	Harvala et al. (2011)
SA5_VP1_3021is	TTNTGGACNGARGGNAAYGCNCC	
SA5_VP1_3493ias	AGGTCYCTRTTVYARTCYTCCCA	
SA5_VP1_3610oas	GGSCCYTGRAANGAVACNGGGTA	
SA5_VP1_2606os	CCAGCATTAACWGCARCRGAAACWGG	This study
SA5_VP1_2650is	ACCAAGTGACACYRTRCAAACCAGG	
SA5_VP1_3118ias	CCACCCRTCATARAACRWRCTATACGC	
SA5_VP1_3287oas	TGGRTMCCAAGACCACCRCG	
EVH_VP1_2190os	GGCAATAGAGARGAGGCAATGCTRGG	This study
EVH_VP1_2337is	CTTGGTTYCAAACRAAYATGGTRGTTCC	
EVH_VP1_3015ias	GARGGRTTYGTYGARGATTGCCA	
EVH_VP1_3080oas	ATTRGCATTTGACACAAAAGGCAYKGA	
EVH_VP1_2851os	AYGTRCGCTTTGAYCTTGARGTSA	This study
EVH_VP1_2994is	TGGCAATCYTCRACRAAYCCYTC	
EVH_VP1_3653ias	TCTCTCAGGGTAGTAYTCGCTCGC	
EVH_VP1_3666oas	CGTGNGTTTGGTATCTCKCWGGRTAG	
EVJ_VP1_2337s	TGTGGTAYCARACAAAYTTTGTRGTHCC	This study
EVJ_VP1_3207ias	CTGCAAARGAWCCCARCATRTTACTWGG	
EVJ_VP1_3285oas	GCACKCACRTGTTTKGSYTTCATGTA	
EVJ_VP1_2841os	TGTTYACDTACATGAGRTTTGMTGC	This study
EVJ_VP1_2993is	TGGCAATCWGGYACYAAYCCMTC	
EVJ_VP1_3526as	GTCACAMCCRTGKGCDGTDGTG	

B) Amplification of complete genomes

Primer[1]	Sequence	Region
EVJ_1s	CGC TTA AAA TAG CCT SWG GGT TGY TCC	
EVJ_440ias	GCT CAR TAG GCT CTT CAC ACC ATG TC	1-440
EVJ_573oas	RGAAACACGGACACCCAAAGTAGT	
EVJ-309s	TGTAGHTYWGGTCGATGAGTC	
EVJ_764ias	TGT CKT GAM ACY TGT GCT CCC AT	309-764
EVJ_891oas	TGG GTC CTG GCT RAA RTC YTG TTT	
CPML8109_1039os	ATT GTA GTA GGG TAY GGW GAR TGG C	
CPML8109_1096is	GTG GAT AAA CCA ACC AAR CCH GAY GT	
CPML8109_2486ias	GTC CCC TTG CAG TAC AGA TGC TT	
CPML8109_2583oas	TGT GCC AAT GTT ATG GGA GGA TGC	
CPML3961_1041os	GGT TGT GGC KTA YGG TGA RTG GC	1096-2400
CPML3961_1096is	GTA GAT AAA CCA ACR MAR CCY GAY GT	
CPML3961_2496ias	GCC TAC TGG RTC TCC TTG KAG AAY TG	
CPML3961_2579oas	GCA ATG TTG TGY GTR CTT TCC ART G	
GR2815_1040os	ATT GTT GTA GGG TAT GGT GAG TGG C	
GR2815_1096is	GTG GAT AAA CCA ACC AAR CCH GAY GT	
GR2815_2402ias	GCA ATT ATA TAT CCG TTG TTA GGT GCC CC	
GR2815_2441oas	TCA GCA AAC GGA CAC TAA AGT TGG G	
EVJ_3349os	AAC AAC WGG RGY KTT TGG ACA ACA	
EVJ_3394is	GGW GCM RTH TAT GTG GGT AAT TAC AGA	
EVJ_4826ias	GTG CTC TGC TAT CTG ARA TGG TKG G	
EVJ_4956oas	CAG KGT TTG AAR TTY GCT GGR TCA CA	
EVJ_4447os	CGT ACA GTT CAA GTC CAA ATG CCG C	
EVJ_4692is	GGT GTC YAG TGT TGA YTT YGT GCC A	4692-6097
EVJ_6097ias	CGG GTT CCT TCA CAC CTT CAA AGA T	
EVJ_6134oas	TCC WCC TTG AGT CTG GGG TCT TTC	
EVJ_5825os	CAC AGG ATG YTH ATG TAY AAY TTY CCM AC	
EVJ_5907is	TTC ATG TTG GWG GYA ATG GRC AYC	5907-7466
EVJ_7466a	CAC TCT GGT TGT GCT AAA TTT WCC CCT G	

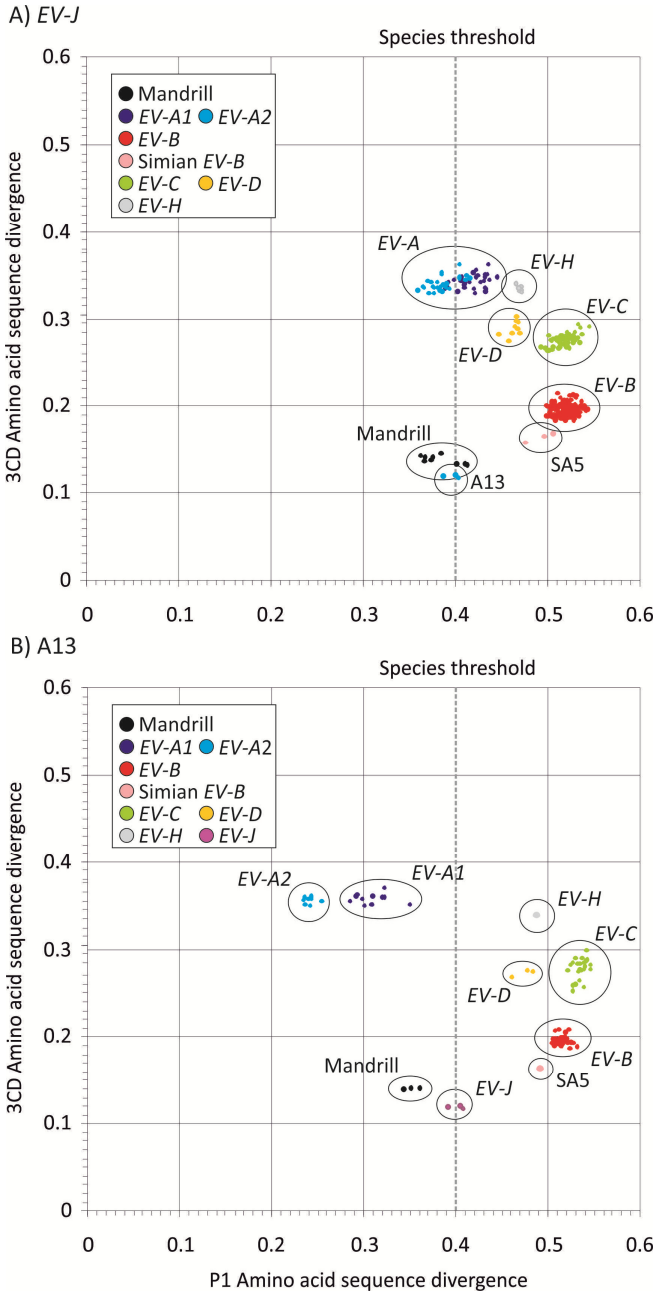
[1]Primers were named using a combination of target species, region, position (numbered according to the poliovirus Leon serotype 3 sequence, accession number K01392) and orientation (s, sense; a, antisense; os, outer sense; is, inner sense; oas, outer antisense; ias, inner antisense). Primer sets are separated by dashed lines.

FIGURE S1



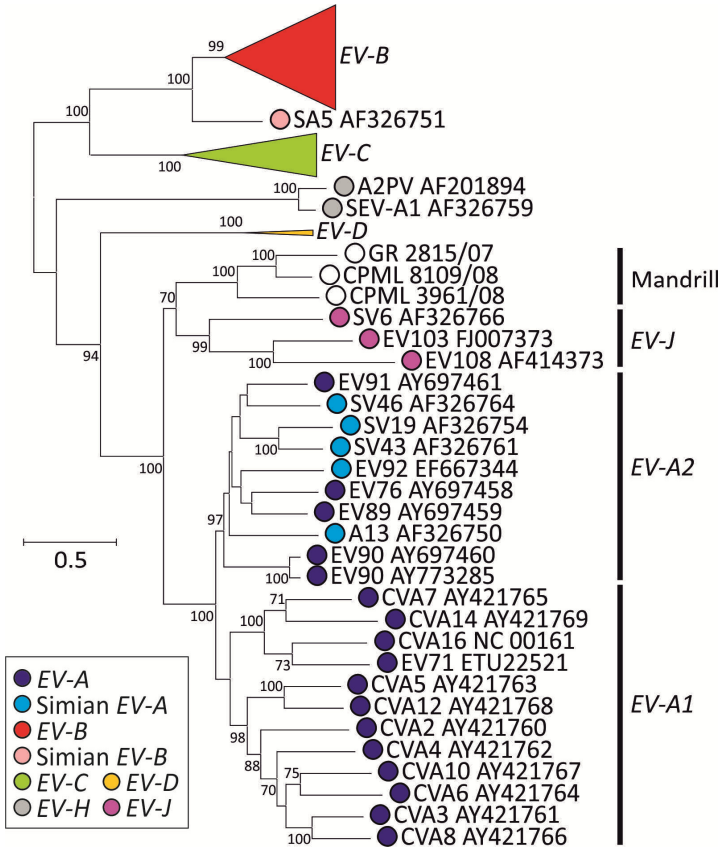
Divergence between primate viruses SA5, A13 and *EV-J* and human sequences within species A-D. Plots were generated as described for Fig. 5.

FIGURE S2



Comparison of pairwise amino acid distances in P1 (positions 743-3376) and 3CD regions (positions 5429-7360) between (A) *EV-J* and (B) A13, with mandrill viruses and EV species A-D, *EV-J* and *EV-H*. See legend to Fig. 4 for further information.

FIGURE S3



Phylogenetic analysis of the P1 region of *EV-A* to *-D*, *-H*, *-J* and mandrill viruses. Using the whole dataset, bootstrap support exists for *EV-A*, *EV-J* and mandrill variants individually but also for their combined grouping.