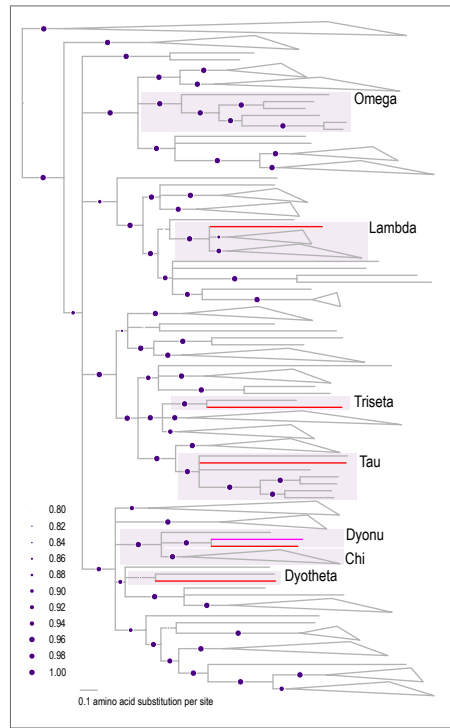




Supplementary Figure 1: Maximum likelihood tree based on L1 nucleotide sequence using the best-fit model GTR+I+G4. LwPV1-7 highlighted in red, with red branch showing lineage, California sea lion papillomavirus ZcPV1 highlighted in pink, with pink branch showing lineage. Branches in black indicated lineages absent of E7 gene. Branch support values indicated in blue circle size gradient. Branches with < 0.75 aLRT branch support were collapsed. Papillomaviruses marked with asterisk have yet to be classified by ICTV.

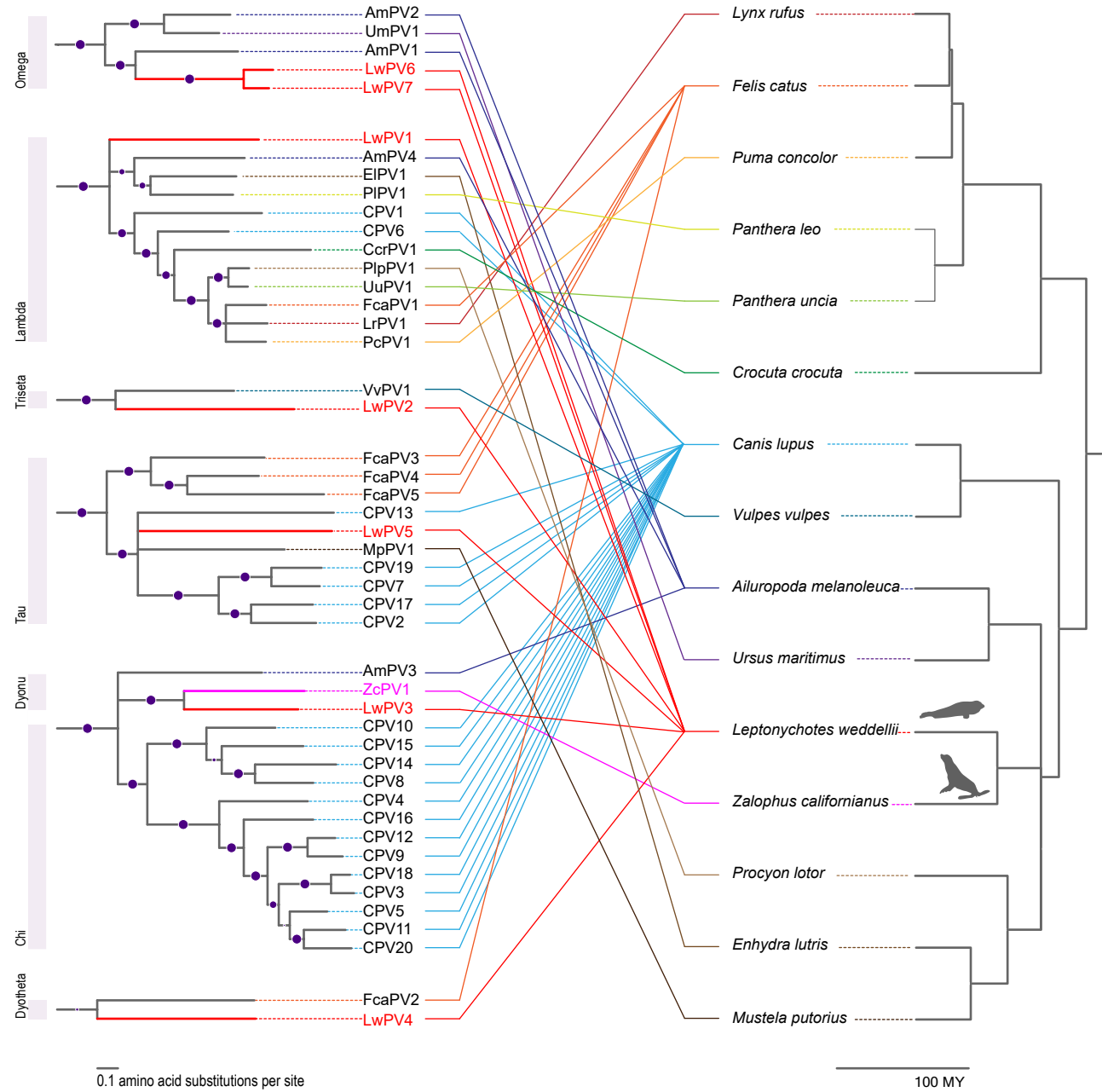


aLRT branch support

- 0.80
- 0.82
- 0.84
- 0.86
- 0.88
- 0.90
- 0.92
- 0.94
- 0.96
- 0.98
- 1.00

 California sea lion
(*Zalophus californianus*)

 Weddell seal
(*Leptonychotes weddellii*)



Supplementary Figure 2: Concatenated E1-E2-L1 tree (Figure 3) in left hand box. Shaded clades where LwPVs cluster are shown in full with phylogenetic relationship to papillomavirus members links drawn to respective hosts in carnivore phylogenetic tree.

Supplementary Table 1: All complete papillomavirus genomes including GenBank accession number, virus name, acronym, associated genus, species and host organism.

GenBank Accession #	Virus	Acronym	Genus	Species	Host
MF327535	Ailuropoda melanoleuca papillomavirus 1	AmPV1	<i>Omegapapillomavirus</i>	Unclassified	<i>Ailuropoda melanoleuca</i>
MF327536	Ailuropoda melanoleuca papillomavirus 2	AmPV2	<i>Omegapapillomavirus</i>	Unclassified	<i>Ailuropoda melanoleuca</i>
MF327537	Ailuropoda Melanoleuca papillomavirus 3	AmPV3	<i>Dyonupapillomavirus</i>	Unclassified	<i>Ailuropoda melanoleuca</i>
MF327538	Ailuropoda melanoleuca papillomavirus 4	AmPV4	<i>Lamdapapillomavirus</i>	Unclassified	<i>Ailuropoda melanoleuca</i>
M15953	Alces alces papillomavirus 1	AaPV1	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 1</i>	Alces Alces
KP861980	Alouatta guariba papillomavirus 1	AgPV1	<i>Dyoomikronpapillomavirus</i>	<i>Dyoomikronpapillomavirus</i>	<i>Alouatta guariba</i>
HQ625440	Apodemus sylvaticus papillomavirus 1	AsPV1	<i>Pipapillomavirus</i>	<i>Pipapillomavirus 2</i>	<i>Apodemus sylvaticus</i>
GU220391	Bettongia penicillata papillomavirus 1	BpPV1	<i>Dyolambdapapillomavirus</i>	<i>Dyolambdapapillomavirus 1</i>	<i>Bettongia penicillata</i>
JX174437	Bos grunniens papillomavirus 1	BgPV1	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 4</i>	<i>Bos grunniens</i>
X02346	Bos taurus papillomavirus 1	BPV1	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 4</i>	<i>Bos Taurus</i>
AB331651	Bos taurus papillomavirus 10	BPV10	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 1</i>	<i>Bos taurus</i>
AB543507	Bos taurus papillomavirus 11	BPV11	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 1</i>	<i>Bos taurus</i>
JF834523	Bos taurus papillomavirus 12	BPV12	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 2</i>	<i>Bos taurus</i>
JQ798171	Bos taurus papillomavirus 13	BPV13	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 4</i>	<i>Bos taurus</i>
M20219	Bos taurus papillomavirus 2	BPV2	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 4</i>	<i>Bos taurus</i>
KY705374	Bos taurus papillomavirus 22	BPV22	<i>Dyokappapapillomavirus</i>	Unclassified	<i>Bos taurus</i>
KX098515	Bos taurus papillomavirus 23	BPV23	<i>Xipapillomavirus</i>	Unclassified	<i>Bos taurus</i>
AF486184	Bos taurus papillomavirus 3	BPV3	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 1</i>	<i>Bos taurus</i>
X05817	Bos taurus papillomavirus 4	BPV4	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 1</i>	<i>Bos taurus</i>
AF457465	Bos taurus papillomavirus 5	BPV5	<i>Epsilonpapillomavirus</i>	<i>Epsilonpapillomavirus 1</i>	<i>Bos taurus</i>
AJ620208	Bos taurus papillomavirus 6	BPV6	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 1</i>	<i>Bos taurus</i>
DQ217793	Bos taurus papillomavirus 6	BPV7	<i>Dyoxipapillomavirus</i>	<i>Dyoxipapillomavirus 1</i>	<i>Bos taurus</i>
DQ098913	Bos taurus papillomavirus 8	BPV8	<i>Epsilonpapillomavirus</i>	<i>Epsilonpapillomavirus 1</i>	<i>Bos taurus</i>
AB331650	Bos taurus papillomavirus 9	BPV9	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 1</i>	<i>Bos taurus</i>
KP276343	Bovine papillomavirus 14	BPV14	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 4</i>	<i>Bos taurus</i>
KM983393	Bovine papillomavirus 15	BPV15	<i>Xipapillomavirus</i>	<i>Xipapillomavirus 1</i>	<i>Bos taurus</i>
KU519391	Bovine papillomavirus 16	BPV16	<i>Dyokappapapillomavirus</i>	<i>Dyokappapapillomavirus</i>	<i>Bos taurus</i>
KU519392	Bovine papillomavirus 17	BPV17	<i>Xipapillomavirus</i>	<i>Xipapillomavirus</i>	<i>Bos taurus</i>
KU519393	Bovine papillomavirus 18	BPV18	<i>Dyokappapapillomavirus</i>	<i>Dyokappapapillomavirus</i>	<i>Bos taurus</i>
KU519394	Bovine papillomavirus 19	BPV19	Unclassified	Unclassified	<i>Bos taurus</i>
KU519395	Bovine papillomavirus 20	BPV20	<i>Xipapillomavirus</i>	<i>Xipapillomavirus</i>	<i>Bos taurus</i>
KU519396	Bovine papillomavirus 21	BPV21	Unclassified	Unclassified	<i>Bos taurus</i>
HQ912790	Camelus dromedarius papillomavirus 1	CdPV1	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 6</i>	<i>Camelus dromedarius</i>
HQ912791	Camelus dromedarius papillomavirus 2	CdPV2	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 6</i>	<i>Camelus dromedarius</i>
KP099966	Canine papillomavirus 16	CPV16	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 2</i>	<i>Canis familiaris</i>
KT272399	Canine papillomavirus 17	CPV17	<i>Taupapillomavirus</i>	<i>Taupapillomavirus</i>	<i>Canis familiaris</i>
KT326919	Canine papillomavirus 18	CPV18	<i>Chipapillomavirus</i>	<i>Chipapillomavirus</i>	<i>Canis familiaris</i>
KX599536	Canine papillomavirus 19	CPV19	<i>Taupapillomavirus</i>	<i>Taupapillomavirus</i>	<i>Canis familiaris</i>
KT901797	Canine papillomavirus 20	CPV20	<i>Chipapillomavirus</i>	<i>Chipapillomavirus</i>	<i>Canis familiaris</i>
D55633	Canis familiaris oral papillomavirus 1	CPV1	<i>Lambdapapillomavirus</i>	<i>Lambdapapillomavirus 2</i>	<i>Canis familiaris</i>
JF800657	Canis familiaris papillomavirus 10	CPV10	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 3</i>	<i>Canis familiaris</i>
JF800658	Canis familiaris papillomavirus 11	CPV11	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 1</i>	<i>Canis familiaris</i>
JQ754321	Canis familiaris papillomavirus 12	CPV12	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 1</i>	<i>Canis familiaris</i>

JX141478	Canis familiaris papillomavirus 13	CPV13	<i>Taupapillomavirus</i>	<i>Taupapillomavirus 2</i>	<i>Canis familiaris</i>
JQ701802	Canis familiaris papillomavirus 14	CPV14	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 3</i>	<i>Canis familiaris</i>
JX899359	Canis familiaris papillomavirus 15	CPV15	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 3</i>	<i>Canis familiaris</i>
AY722648	Canis familiaris papillomavirus 2	CPV2	<i>Taupapillomavirus</i>	<i>Taupapillomavirus 1</i>	<i>Canis familiaris</i>
DQ295066	Canis familiaris papillomavirus 3	CPV3	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 1</i>	<i>Canis familiaris</i>
EF584537	Canis familiaris papillomavirus 4	CPV4	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 2</i>	<i>Canis familiaris</i>
FJ492743	Canis familiaris papillomavirus 5	CPV5	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 1</i>	<i>Canis familiaris</i>
FJ492744	Canis familiaris papillomavirus 6	CPV6	<i>Lambdapapillomavirus</i>	<i>Lambdapapillomavirus 3</i>	<i>Canis familiaris</i>
FJ492742	Canis familiaris papillomavirus 7	CPV7	<i>Taupapillomavirus</i>	<i>Taupapillomavirus 1</i>	<i>Canis familiaris</i>
HQ262536	Canis familiaris papillomavirus 8	CPV8	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 3</i>	<i>Canis familiaris</i>
JF800656	Canis familiaris papillomavirus 9	CPV9	<i>Chipapillomavirus</i>	<i>Chipapillomavirus 1</i>	<i>Canis familiaris</i>
DQ091200	Capra hircus papillomavirus 1	ChPV1	<i>Phipapillomavirus</i>	<i>Phipapillomavirus 1</i>	<i>Capra hircus</i>
EF680235	Capreolus capreolus papillomavirus 1	CcaPV1	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus 5</i>	<i>Capreolus capreolus</i>
EU493092	Caretta caretta papillomavirus 1	CcPV1	<i>Dyozetapapillomavirus</i>	<i>Dyozetapapillomavirus 1</i>	<i>Caretta caretta</i>
KC020689	Castor canadensis papillomavirus 1	CcanPV1	<i>Dyosigmapapillomavirus</i>	<i>Dyosigmapapillomavirus 1</i>	<i>Castor canadensis</i>
KT932712	Cervus elaphus papillomavirus 1	CePV2	<i>Xipapillomavirus</i>	<i>Xipapillomavirus</i>	<i>Cervus elaphus</i>
KU350625	Cervus elaphus papillomavirus 2	CePV1	<i>Epsilonpapillomavirus</i>	<i>Epsilonpapillomavirus</i>	<i>Cervus elaphus</i>
EU493091	Chelonia mydas papillomavirus 1	CmPV1	<i>Dyozetapapillomavirus</i>	<i>Dyozetapapillomavirus 1</i>	<i>Chelonia mydas</i>
GU014532	Colobus guereza papillomavirus 1	CgPV1	<i>Alphapapillomavirus</i>	<i>Alphapapillomavirus 14</i>	<i>Colobus guereza</i>
GU014533	Colobus guereza papillomavirus 2	CgPV2	<i>Betapapillomavirus</i>	<i>Betapapillomavirus 1</i>	<i>Colobus guereza</i>
HQ585856	Crocota crocuta papillomavirus 1	CcrPV1	<i>Lambdapapillomavirus</i>	<i>Lambdapapillomavirus 5</i>	<i>Crocota crocuta</i>
GU117620	Delphinus delphis papillomavirus	DdPV1	<i>Upsilonpapillomavirus</i>	<i>Upsilonpapillomavirus 1</i>	<i>Delphinus delphis</i>
JX123128	Eidolon helvum papillomavirus 1	EhPV1	<i>Dyopsilonpapillomavirus</i>	<i>Dyopsilonpapillomavirus 1</i>	<i>Eidolon helvum</i>
KX276957	Eidolon helvum papillomavirus 2	EhPV2	<i>Psipapillomavirus</i>	Unclassified	<i>Eidolon helvum</i>
KX276956	Eidolon helvum papillomavirus 3	EhPV3	<i>Psipapillomavirus</i>	Unclassified	<i>Eidolon helvum</i>
KJ410351	Enhydra lutris papillomavirus 1	EIPV1	<i>Lambdapapillomavirus</i>	<i>Lambdapapillomavirus 4</i>	<i>Enhydra lutris</i>
KC858263	Eptesicus serotinus papillomavirus 1	EsPV1	<i>Dyopsipapillomavirus</i>	<i>Dyopsipapillomavirus 1</i>	<i>Eptesicus serotinus</i>
KC858264	Eptesicus serotinus papillomavirus 2	EsPV2	<i>Dyoomegapapillomavirus</i>	<i>Dyoomegapapillomavirus 1</i>	<i>Eptesicus serotinus</i>
KC858265	Eptesicus serotinus papillomavirus 3	EsPV3	<i>Dyopsipapillomavirus</i>	<i>Dyopsipapillomavirus 1</i>	<i>Eptesicus serotinus</i>
KF741371	Equus asinus papillomavirus	EaPV1	<i>Dyochipapillomavirus</i>	<i>Dyochipapillomavirus 1</i>	<i>Equus Asinus</i>
AF498323	Equus caballus papillomavirus 1	EcPV1	<i>Zetapapillomavirus</i>	<i>Zetapapillomavirus 1</i>	<i>Equus ferus caballus</i>
EU503122	Equus caballus papillomavirus 2	EcPV2	<i>Dyoiotapapillomavirus</i>	<i>Dyoiotapapillomavirus 1</i>	<i>Equus ferus caballus</i>
GU384895	Equus caballus papillomavirus 3	EcPV3	<i>Dyorchopapillomavirus</i>	<i>Dyorchopapillomavirus 1</i>	<i>Equus ferus caballus</i>
JQ031032	Equus caballus papillomavirus 4	EcPV4	<i>Dyoiotapapillomavirus</i>	<i>Dyoiotapapillomavirus 2</i>	<i>Equus ferus caballus</i>
JQ031033	Equus caballus papillomavirus 5	EcPV5	<i>Dyoiotapapillomavirus</i>	<i>Dyoiotapapillomavirus 2</i>	<i>Equus ferus caballus</i>
JQ965698	Equus caballus papillomavirus 6	EcPV6	<i>Dyorchopapillomavirus</i>	<i>Dyorchopapillomavirus 1</i>	<i>Equus ferus caballus</i>
JX035935	Equus caballus papillomavirus 7	EcPV7	<i>Dyorchopapillomavirus</i>	<i>Dyorchopapillomavirus 1</i>	<i>Equus ferus caballus</i>
KU963288	Equus caballus papillomavirus 8	EcPV8	Unclassified	Unclassified	<i>Equus ferus caballus</i>
AY684126	Erethizon dorsatum papillomavirus 1	EdPV1	<i>Sigmapapillomavirus</i>	<i>Sigmapapillomavirus 1</i>	<i>Erethizon dorsatum</i>
FJ379293	Erinaceus europaeus papillomavirus 1	EePV1	<i>Dyoetapapillomavirus</i>	<i>Dyoetapapillomavirus 1</i>	<i>Erinaceus europaeus</i>
JX972168	Felis catus papillomavirus 3	FcaPV3	<i>Taupapillomavirus</i>	<i>Taupapillomavirus 3</i>	<i>Felis domesticus</i>
KF147892	Felis catus papillomavirus 4	FcaPV4	<i>Taupapillomavirus</i>	<i>Taupapillomavirus 3</i>	<i>Felis domesticus</i>
KY853656	Felis catus papillomavirus 5	FcaPV5	<i>Taupapillomavirus</i>	Unclassified	<i>Felis domesticus</i>
AF480454	Felis domesticus papillomavirus 1	FcaPV1	<i>Lambdapapillomavirus</i>	<i>Lambdapapillomavirus 1</i>	<i>Felis domesticus</i>
EU796884	Felis domesticus papillomavirus 2	FcaPV2	<i>Dyothetapapillomavirus</i>	<i>Dyothetapapillomavirus 1</i>	<i>Felis domesticus</i>
EU188799	Francolinus leucoscepus papillomavirus 1	FIPV1	<i>Dyoepsilonpapillomavirus</i>	<i>Dyoepsilonpapillomavirus 1</i>	<i>Francolinus leucoscepus</i>
AY057109	Fringilla coelebs papillomavirus	FcPV1	<i>Etapapillomavirus</i>	<i>Etapapillomavirus 1</i>	<i>Fringilla coelebs</i>
KJ452243	Fulmarus glacialis papillomavirus 1	FgPV1	<i>Treiszetapapillomavirus</i>	<i>Treiszetapapillomavirus</i>	<i>Fulmarus Glacialis</i>
KX954132	Giraffa camelopardalis papillomavirus 1	GcPV1	<i>Deltapapillomavirus</i>	<i>Deltapapillomavirus</i>	<i>Giraffa camelopardalis</i>
V01116	Human papillomavirus 1	HPV1	<i>Mupapillomavirus</i>	<i>Mupapillomavirus 1</i>	<i>Homo sapiens</i>

X74465	Human papillomavirus 10	HPV10	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
FM955839	Human papillomavirus 100	HPV100	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
DQ080081	Human papillomavirus 101	HPV101	Gammapapillomavirus	Gammapapillomavirus 6	Homo sapiens
DQ080083	Human papillomavirus 102	HPV102	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
DQ080078	Human papillomavirus 103	HPV103	Gammapapillomavirus	Gammapapillomavirus 6	Homo sapiens
FM955840	Human papillomavirus 104	HPV104	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
FM955841	Human papillomavirus 105	HPV105	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
DQ080082	Human papillomavirus 106	HPV106	Alphapapillomavirus	Alphapapillomavirus 14	Homo sapiens
EF422221	Human papillomavirus 107	HPV107	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
FM212639	Human papillomavirus 108	HPV108	Gammapapillomavirus	Gammapapillomavirus 6	Homo sapiens
EU541441	Human papillomavirus 109	HPV109	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
M14119	Human papillomavirus 11	HPV11	Alphapapillomavirus	Alphapapillomavirus 10	Homo sapiens
EU410348	Human papillomavirus 110	HPV110	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
EU410349	Human papillomavirus 111	HPV111	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
EU541442	Human papillomavirus 112	HPV112	Gammapapillomavirus	Gammapapillomavirus 8	Homo sapiens
FM955842	Human papillomavirus 113	HPV113	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
GQ244463	Human papillomavirus 114	HPV114	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
FJ947080	Human papillomavirus 115	HPV115	Betapapillomavirus	Betapapillomavirus 3	Homo sapiens
FJ804072	Human papillomavirus 116	HPV116	Gammapapillomavirus	Gammapapillomavirus 9	Homo sapiens
GQ246950	Human papillomavirus 117	HPV117	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
GQ246951	Human papillomavirus 118	HPV118	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
GQ845441	Human papillomavirus 119	HPV119	Gammapapillomavirus	Gammapapillomavirus 8	Homo sapiens
X74466	Human papillomavirus 12	HPV12	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
GQ845442	Human papillomavirus 120	HPV120	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
GQ845443	Human papillomavirus 121	HPV121	Gammapapillomavirus	Gammapapillomavirus 10	Homo sapiens
GQ845444	Human papillomavirus 122	HPV122	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
GQ845445	Human papillomavirus 123	HPV123	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
GQ845446	Human papillomavirus 124	HPV124	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
FN547152	Human papillomavirus 125	HPV125	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
AB646346	Human papillomavirus 126	HPV126	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
HM011570	Human papillomavirus 127	HPV127	Gammapapillomavirus	Gammapapillomavirus 12	Homo sapiens
GU225708	Human papillomavirus 128	HPV128	Gammapapillomavirus	Gammapapillomavirus 13	Homo sapiens
GU233853	Human papillomavirus 129	HPV129	Gammapapillomavirus	Gammapapillomavirus 9	Homo sapiens
X62843	Human papillomavirus 13	HPV13	Alphapapillomavirus	Alphapapillomavirus 10	Homo sapiens
GU117630	Human papillomavirus 130	HPV130	Gammapapillomavirus	Gammapapillomavirus 10	Homo sapiens
GU117631	Human papillomavirus 131	HPV131	Gammapapillomavirus	Gammapapillomavirus 14	Homo sapiens
GU117632	Human papillomavirus 132	HPV132	Gammapapillomavirus	Gammapapillomavirus 12	Homo sapiens
GU117633	Human papillomavirus 133	HPV133	Gammapapillomavirus	Gammapapillomavirus 10	Homo sapiens
GU117634	Human papillomavirus 134	HPV134	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
HM999987	Human papillomavirus 135	HPV135	Gammapapillomavirus	Gammapapillomavirus 15	Homo sapiens
HM999988	Human papillomavirus 136	HPV136	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
HM999989	Human papillomavirus 137	HPV137	Gammapapillomavirus	Gammapapillomavirus 16	Homo sapiens
HM999990	Human papillomavirus 138	HPV138	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
HM999991	Human papillomavirus 139	HPV139	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
X74467	Human papillomavirus 14	HPV14	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
HM999992	Human papillomavirus 140	HPV140	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
HM999993	Human papillomavirus 141	HPV141	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
HM999994	Human papillomavirus 142	HPV142	Gammapapillomavirus	Gammapapillomavirus 10	Homo sapiens
HM999995	Human papillomavirus 143	HPV143	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
HM999996	Human papillomavirus 144	HPV144	Gammapapillomavirus	Gammapapillomavirus 17	Homo sapiens

HM999997	Human papillomavirus 145	HPV145	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
HM999998	Human papillomavirus 146	HPV146	Gammapapillomavirus	Gammapapillomavirus 15	Homo sapiens
HM999999	Human papillomavirus 147	HPV147	Gammapapillomavirus	Gammapapillomavirus 8	Homo sapiens
GU129016	Human papillomavirus 148	HPV148	Gammapapillomavirus	Gammapapillomavirus 12	Homo sapiens
GU117629	Human papillomavirus 149	HPV149	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
X74468	Human papillomavirus 15	HPV15	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
FN677755	Human papillomavirus 150	HPV150	Betapapillomavirus	Betapapillomavirus 5	Homo sapiens
FN677756	Human papillomavirus 151	HPV151	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
JF304768	Human papillomavirus 152	HPV152	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
JN171845	Human papillomavirus 153	HPV153	Gammapapillomavirus	Gammapapillomavirus 13	Homo sapiens
JN211193	Human papillomavirus 154	HPV154	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
JF906559	Human papillomavirus 155	HPV155	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
JX429973	Human papillomavirus 156	HPV156	Gammapapillomavirus	Gammapapillomavirus 18	Homo sapiens
KT698166	Human papillomavirus 157	HPV157	Gammapapillomavirus	Gammapapillomavirus	Homo sapiens
KT698168	Human papillomavirus 158	HPV158	Gammapapillomavirus	Gammapapillomavirus	Homo sapiens
HE963025	Human papillomavirus 159	HPV159	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
K02718	Human papillomavirus 16	HPV16	Alphapapillomavirus	Alphapapillomavirus 9	Homo sapiens
AB745694	Human papillomavirus 160	HPV160	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
JX413109	Human papillomavirus 161	HPV161	Gammapapillomavirus	Gammapapillomavirus 19	Homo sapiens
JX413108	Human papillomavirus 162	HPV162	Gammapapillomavirus	Gammapapillomavirus 19	Homo sapiens
JX413107	Human papillomavirus 163	HPV163	Gammapapillomavirus	Gammapapillomavirus 20	Homo sapiens
JX413106	Human papillomavirus 164	HPV164	Gammapapillomavirus	Gammapapillomavirus 8	Homo sapiens
JX444072	Human papillomavirus 165	HPV165	Gammapapillomavirus	Gammapapillomavirus 12	Homo sapiens
JX413104	Human papillomavirus 166	HPV166	Gammapapillomavirus	Gammapapillomavirus 19	Homo sapiens
KC862318	Human papillomavirus 167	HPV167	Gammapapillomavirus	Gammapapillomavirus 21	Homo sapiens
KC862317	Human papillomavirus 168	HPV168	Gammapapillomavirus	Gammapapillomavirus 8	Homo sapiens
JX413105	Human papillomavirus 169	HPV169	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
X74469	Human papillomavirus 17	HPV17	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
JX413110	Human papillomavirus 170	HPV170	Gammapapillomavirus	Gammapapillomavirus 7	Homo sapiens
KF006398	Human papillomavirus 171	HPV171	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
KF006399	Human papillomavirus 172	HPV172	Gammapapillomavirus	Gammapapillomavirus 22	Homo sapiens
KF006400	Human papillomavirus 173	HPV173	Gammapapillomavirus	Gammapapillomavirus 1	Homo sapiens
HF930491	Human papillomavirus 174	HPV174	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
KC108721	Human papillomavirus 175	HPV175	Gammapapillomavirus	Gammapapillomavirus 23	Homo sapiens
KJ130020	Human papillomavirus 178	HPV178	Gammapapillomavirus	Gammapapillomavirus 24	Homo sapiens
X05015	Human papillomavirus 18	HPV18	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
KC108722	Human papillomavirus 180	HPV180	Gammapapillomavirus	Gammapapillomavirus 10	Homo sapiens
X74470	Human papillomavirus 19	HPV19	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
X55964	Human papillomavirus 2	HPV2	Alphapapillomavirus	Alphapapillomavirus 4	Homo sapiens
U31778	Human papillomavirus 20	HPV20	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
KP692114	Human papillomavirus 200	HPV200	Gammapapillomavirus	Gammapapillomavirus 2	Homo sapiens
KP692115	Human papillomavirus 201	HPV201	Gammapapillomavirus	Gammapapillomavirus 27	Homo sapiens
KP692116	Human papillomavirus 202	HPV202	Gammapapillomavirus	Gammapapillomavirus 11	Homo sapiens
KP769769	Human papillomavirus 204	HPV204	Mupapillomavirus	Mupapillomavirus 3	Homo sapiens
KT698167	Human papillomavirus 205	HPV205	Gammapapillomavirus	Gammapapillomavirus 1	Homo sapiens
KY242583	Human papillomavirus 209	HPV209	Betapapillomavirus	Unclassified	Homo sapiens
U31779	Human papillomavirus 21	HPV21	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
U31780	Human papillomavirus 22	HPV22	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
U31781	Human papillomavirus 23	HPV23	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
U31782	Human papillomavirus 24	HPV24	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens

X74471	Human papillomavirus 25	HPV25	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
X74472	Human papillomavirus 26	HPV26	Alphapapillomavirus	Alphapapillomavirus 5	Homo sapiens
X74473	Human papillomavirus 27	HPV27	Alphapapillomavirus	Alphapapillomavirus 4	Homo sapiens
U31783	Human papillomavirus 28	HPV28	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
U31784	Human papillomavirus 29	HPV29	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
X74462	Human papillomavirus 3	HPV3	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
X74474	Human papillomavirus 30	HPV30	Alphapapillomavirus	Alphapapillomavirus 6	Homo sapiens
J04353	Human papillomavirus 31	HPV31	Alphapapillomavirus	Alphapapillomavirus 9	Homo sapiens
X74475	Human papillomavirus 32	HPV32	Alphapapillomavirus	Alphapapillomavirus 1	Homo sapiens
M12732	Human papillomavirus 33	HPV33	Alphapapillomavirus	Alphapapillomavirus 9	Homo sapiens
X74476	Human papillomavirus 34	HPV34	Alphapapillomavirus	Alphapapillomavirus 11	Homo sapiens
X74477	Human papillomavirus 35	HPV35	Alphapapillomavirus	Alphapapillomavirus 9	Homo sapiens
U31785	Human papillomavirus 36	HPV36	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
U31786	Human papillomavirus 37	HPV37	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
U31787	Human papillomavirus 38	HPV38	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
M62849	Human papillomavirus 39	HPV39	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
X70827	Human papillomavirus 4	HPV4	Gammapapillomavirus	Gammapapillomavirus 1	Homo sapiens
X74478	Human papillomavirus 40	HPV40	Alphapapillomavirus	Alphapapillomavirus 8	Homo sapiens
X56147	Human papillomavirus 41	HPV41	Nupapillomavirus	Nupapillomavirus 1	Homo sapiens
M73236	Human papillomavirus 42	HPV42	Alphapapillomavirus	Alphapapillomavirus 1	Homo sapiens
AJ620205	Human papillomavirus 43	HPV43	Alphapapillomavirus	Alphapapillomavirus 8	Homo sapiens
U31788	Human papillomavirus 44	HPV44	Alphapapillomavirus	Alphapapillomavirus 10	Homo sapiens
X74479	Human papillomavirus 45	HPV45	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
M32305	Human papillomavirus 47	HPV47	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
U31789	Human papillomavirus 48	HPV48	Gammapapillomavirus	Gammapapillomavirus 2	Homo sapiens
X74480	Human papillomavirus 49	HPV49	Betapapillomavirus	Betapapillomavirus 3	Homo sapiens
M17463	Human papillomavirus 5	HPV5	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
U31790	Human papillomavirus 50	HPV50	Gammapapillomavirus	Gammapapillomavirus 3	Homo sapiens
M62877	Human papillomavirus 51	HPV51	Alphapapillomavirus	Alphapapillomavirus 5	Homo sapiens
X74481	Human papillomavirus 52	HPV52	Alphapapillomavirus	Alphapapillomavirus 9	Homo sapiens
X74482	Human papillomavirus 53	HPV53	Alphapapillomavirus	Alphapapillomavirus 6	Homo sapiens
U37488	Human papillomavirus 54	HPV54	Alphapapillomavirus	Alphapapillomavirus 13	Homo sapiens
X74483	Human papillomavirus 56	HPV56	Alphapapillomavirus	Alphapapillomavirus 6	Homo sapiens
X55965	Human papillomavirus 57	HPV57	Alphapapillomavirus	Alphapapillomavirus 4	Homo sapiens
D90400	Human papillomavirus 58	HPV58	Alphapapillomavirus	Alphapapillomavirus 9	Homo sapiens
X77858	Human papillomavirus 59	HPV59	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
X00203	Human papillomavirus 6	HPV6	Alphapapillomavirus	Alphapapillomavirus 10	Homo sapiens
U31792	Human papillomavirus 60	HPV60	Gammapapillomavirus	Gammapapillomavirus 4	Homo sapiens
U31793	Human papillomavirus 61	HPV61	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
AY395706	Human papillomavirus 62	HPV62	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
X70828	Human papillomavirus 63	HPV63	Mupapillomavirus	Mupapillomavirus 2	Homo sapiens
X70829	Human papillomavirus 65	HPV65	Gammapapillomavirus	Gammapapillomavirus 1	Homo sapiens
U31794	Human papillomavirus 66	HPV66	Alphapapillomavirus	Alphapapillomavirus 6	Homo sapiens
D21208	Human papillomavirus 67	HPV67	Alphapapillomavirus	Alphapapillomavirus 9	Homo sapiens
DQ080079	Human papillomavirus 68	HPV68	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
AB027020	Human papillomavirus 69	HPV69	Alphapapillomavirus	Alphapapillomavirus 5	Homo sapiens
X74463	Human papillomavirus 7	HPV7	Alphapapillomavirus	Alphapapillomavirus 8	Homo sapiens
U21941	Human papillomavirus 70	HPV70	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
AB040456	Human papillomavirus 71	HPV71	Alphapapillomavirus	Alphapapillomavirus 14	Homo sapiens
X94164	Human papillomavirus 72	HPV72	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens

X94165	Human papillomavirus 73	HPV73	Alphapapillomavirus	Alphapapillomavirus 11	Homo sapiens
AF436130	Human papillomavirus 74	HPV74	Alphapapillomavirus	Alphapapillomavirus 10	Homo sapiens
Y15173	Human papillomavirus 75	HPV75	Betapapillomavirus	Betapapillomavirus 3	Homo sapiens
Y15174	Human papillomavirus 76	HPV76	Betapapillomavirus	Betapapillomavirus 3	Homo sapiens
Y15175	Human papillomavirus 77	HPV77	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
KC138720	Human papillomavirus 78	HPV78	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
M12737	Human papillomavirus 8	HPV8	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
Y15176	Human papillomavirus 80	HPV80	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
AJ620209	Human papillomavirus 81	HPV81	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
AB027021	Human papillomavirus 82	HPV82	Alphapapillomavirus	Alphapapillomavirus 5	Homo sapiens
AF151983	Human papillomavirus 83	HPV83	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
AF293960	Human papillomavirus 84	HPV84	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
AF131950	Human papillomavirus 85	HPV85	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
AF349909	Human papillomavirus 86	HPV86	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
AJ400628	Human papillomavirus 87	HPV87	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
EF467176	Human papillomavirus 88	HPV88	Gammapapillomavirus	Gammapapillomavirus 5	Homo sapiens
AF436128	Human papillomavirus 89	HPV89	Alphapapillomavirus	Alphapapillomavirus 3	Homo sapiens
X74464	Human papillomavirus 9	HPV9	Betapapillomavirus	Betapapillomavirus 2	Homo sapiens
AY057438	Human papillomavirus 90	HPV90	Alphapapillomavirus	Alphapapillomavirus 14	Homo sapiens
AF419318	Human papillomavirus 91	HPV91	Alphapapillomavirus	Alphapapillomavirus 8	Homo sapiens
AF531420	Human papillomavirus 92	HPV92	Betapapillomavirus	Betapapillomavirus 4	Homo sapiens
AY382778	Human papillomavirus 93	HPV93	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
AJ620211	Human papillomavirus 94	HPV94	Alphapapillomavirus	Alphapapillomavirus 2	Homo sapiens
AJ620210	Human papillomavirus 95	HPV95	Gammapapillomavirus	Gammapapillomavirus 1	Homo sapiens
AY382779	Human papillomavirus 96	HPV96	Betapapillomavirus	Betapapillomavirus 5	Homo sapiens
DQ080080	Human papillomavirus 97	HPV97	Alphapapillomavirus	Alphapapillomavirus 7	Homo sapiens
FM955837	Human papillomavirus 98	HPV98	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
FM955838	Human papillomavirus 99	HPV99	Betapapillomavirus	Betapapillomavirus 1	Homo sapiens
HG421739	Human papillomavirus type 179	HPV179	Gammapapillomavirus	Gammapapillomavirus 15	Homo sapiens
HG530535	Human papillomavirus type 184	HPV184	Gammapapillomavirus	Gammapapillomavirus 25	Homo sapiens
KM085343	Human papillomavirus type 197	HPV197	Gammapapillomavirus	Gammapapillomavirus 24	Homo sapiens
KJ913662	Human papillomavirus type 199	HPV199	Gammapapillomavirus	Gammapapillomavirus 12	Homo sapiens
MG571090	Leptonychotes weddellii papillomavirus 1	LwPV1	Unclassified	Unclassified	Leptonychotes weddellii
MG571089	Leptonychotes weddellii papillomavirus 2	LwPV2	Unclassified	Unclassified	Leptonychotes weddellii
MG571093	Leptonychotes weddellii papillomavirus 3	LwPV3	Unclassified	Unclassified	Leptonychotes weddellii
MG571095	Leptonychotes weddellii papillomavirus 4	LwPV4	Unclassified	Unclassified	Leptonychotes weddellii
MG571094	Leptonychotes weddellii papillomavirus 5	LwPV5	Unclassified	Unclassified	Leptonychotes weddellii
MG571091	Leptonychotes weddellii papillomavirus 6	LwPV6	Unclassified	Unclassified	Leptonychotes weddellii
MG571092	Leptonychotes weddellii papillomavirus 7	LwPV7	Unclassified	Unclassified	Leptonychotes weddellii
AY904722	Lynx rufus papillomavirus 1	LrPV1	Lambdapapillomavirus	Lambdapapillomavirus 1	Lynx rufus
EU028290	Macaca fascicularis papillomavirus 1	MfPV1	Betapapillomavirus	Betapapillomavirus 1	Macaca fascicularis
EU490515	Macaca fascicularis papillomavirus 10	MfPV10	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
GQ227670	Macaca fascicularis papillomavirus 11	MfPV11	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
GU014531	Macaca fascicularis papillomavirus 2	MfPV2	Betapapillomavirus	Betapapillomavirus 6	Macaca fascicularis
EF558839	Macaca fascicularis papillomavirus 3	MfPV3	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
EF558841	Macaca fascicularis papillomavirus 4	MfPV4	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
EF558843	Macaca fascicularis papillomavirus 5	MfPV5	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
EF558840	Macaca fascicularis papillomavirus 6	MfPV6	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
EF558838	Macaca fascicularis papillomavirus 7	MfPV7	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
EF558842	Macaca fascicularis papillomavirus 8	MfPV8	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis

EU490516	Macaca fascicularis papillomavirus 9	MFPV9	Alphapapillomavirus	Alphapapillomavirus 12	Macaca fascicularis
KT944080	Macaca fuscata papillomavirus 1	MfuPV1	Alphapapillomavirus	Alphapapillomavirus	Macaca fuscata
M60184	Macaca mulata papillomavirus 1	MmPV1	Alphapapillomavirus	Alphapapillomavirus 12	Macaca mulata
DQ664501	Mastomys coucha papillomavirus 2	McPV2	Pipapillomavirus	Pipapillomavirus 2	Mastomys coucha
U01834	Mastomys natalensis papillomavirus 1	MnPV1	lotapapillomavirus	lotapapillomavirus 1	Mastomys natalensis
E15111	Mesocricetus auratus papillomavirus 1	MaPV1	Pipapillomavirus	Pipapillomavirus 1	Mesocricetus auratus
DQ269468	Micromys minutus papillomavirus 1	MmiPV1	Pipapillomavirus	Pipapillomavirus 2	Micromys minutus
JQ814848	Miniopterus schreibersii papillomavirus 1	MscPV1	Unclassified	Unclassified	Miniopterus schreibersii
JQ692938	Miniopterus schreibersii papillomavirus 2	MscPV2	Dyotapapillomavirus	Dyotapapillomavirus 1	Miniopterus schreibersii
HQ262535	Morelia spilota papillomavirus 1	MsPV1	Dyomupapillomavirus	Dyomupapillomavirus 1	Morelia spilota
GU808564	Mus musculus papillomavirus type 1	MmuPV1	Pipapillomavirus	Pipapillomavirus 2	Mus musculus
KF006988	Mustela putorius papillomavirus 1	MpPV1	Taupapillomavirus	Taupapillomavirus	Mustela putorius
JQ814847	Myotis ricketti papillomavirus 1	MrPV1	Unclassified	Unclassified	Myotis ricketti
M11910	Odocoileus virginianus papillomavirus 1	OvPV1	Deltapapillomavirus	Deltapapillomavirus 2	Odocoileus virginianus
AF227240	Oryctolagus cuniculus papillomavirus 2	OcPV1	Kappapapillomavirus	Kappapapillomavirus 1	Oryctolagus cuniculus
U83594	Ovis aries papillomavirus 1	OaPV1	Deltapapillomavirus	Deltapapillomavirus 3	Ovis aries
U83595	Ovis aries papillomavirus 2	OaPV2	Deltapapillomavirus	Deltapapillomavirus 3	Ovis aries
FJ796965	Ovis aries papillomavirus 3	OaPV3	Dyokappapapillomavirus	Dyokappapapillomavirus 1	Ovis aries
KX954121	Ovis aries papillomavirus 4	OaPV4	Deltapapillomavirus	Unclassified	Ovis aries
X62844	Pan paniscus papillomavirus 1	PpPV1	Alphapapillomavirus	Alphapapillomavirus 10	Pan paniscus
AY904724	Panthera leo persica papillomavirus 1	PlpPV1	Lambdapapillomavirus	Lambdapapillomavirus 1	Panthera leo persica
JF304764	papio hamadryas papillomavirus 1	PhPV1	Alphapapillomavirus	Alphapapillomavirus 12	Papio hamadryas
JF755418	Peromyscus papillomavirus 1	PmPV1	lotapapillomavirus	lotapapillomavirus	Peromyscus
GU117621	Phocoena phocoena papillomavirus	PphPV1	Omikronpapillomavirus	Omikronpapillomavirus 1	Phocoena phocoena
GU117622	Phocoena phocoena papillomavirus	PphPV2	Upsilonpapillomavirus	Upsilonpapillomavirus 3	Phocoena phocoena
GU117623	Phocoena phocoena papillomavirus	PphPV4	Dyopipapillomavirus	Dyopipapillomavirus 1	Phocoena phocoena
AJ238373	Phocoena spinipinnis papillomavirus	PsPV1	Omikronpapillomavirus	Omikronpapillomavirus 1	Phocoena spinipinnis
HG939559	Phodopus sungorus papillomavirus type 1	PsuPV1	Pipapillomavirus	Pipapillomavirus 1	Phodopus sungorus
AY763115	Procyon lotor papillomavirus 1	PIPV1	Lambdapapillomavirus	Lambdapapillomavirus 4	Procyon lotor
AF502599	Psittacus erithacus papillomavirus 1	PePV1	Thetapapillomavirus	Thetapapillomavirus 1	Psittacus erithacus
KT932713	Pudu papillomavirus 1	PpuPV1	Unclassified	Unclassified	Pudu puda
AY904723	Puma concolor papillomavirus 1	PcPV1	Lambdapapillomavirus	Lambdapapillomavirus 1	Puma concolor
KJ173785	Pygoscelis adeliae papillomavirus	PaPV1	Treisepsilonpapillomavirus	Treisepsilonpapillomavirus 1	Pygoscelis adeliae
MF168943	Pygoscelis adeliae papillomavirus 2	PaPV2	Treisepsilonpapillomavirus	Unclassified	Pygoscelis adeliae
AF443292	Rangifer tarandus papillomavirus 1	RtPV1	Deltapapillomavirus	Deltapapillomavirus 1	Rangifer tarandus
KC810012	Rangifer tarandus papillomavirus 2	RtPV2	Xipapillomavirus	Xipapillomavirus 3	Rangifer tarandus
GQ180114	Rattus norvegicus papillomavirus 1	RnPV1	Pipapillomavirus	Pipapillomavirus 2	Rattus norvegicus
HQ625441	Rattus norvegicus papillomavirus 2	RnPV2	lotapapillomavirus	lotapapillomavirus 1	Rattus norvegicus
KT945134	Rattus norvegicus papillomavirus 3	RnPV3	lotapapillomavirus	lotapapillomavirus 1	Rattus norvegicus
KC858266	Rhinolophus ferrumequinum papillomavirus type 1	RfPV1	Treisdeltapapillomavirus	Treisdeltapapillomavirus 1	Rhinolophus ferrumequinum
DQ366842	Rousettus aegyptiacus papillomavirus 1	RaPV1	Psipapillomavirus	Psipapillomavirus 1	Rousettus aegyptiacus
KC876045	Rupicapra rupicapra papillomavirus 1	RrPV1	Dyokappapapillomavirus	Dyokappapapillomavirus 2	Rupicapra rupicapra
KT626573	Rusa alfredi papillomavirus 1	RaIPV1	Deltapapillomavirus	Deltapapillomavirus	Rusa alfredi
KP757765	Rusa timorensis papillomavirus 1	RtiPV1	Unclassified	Unclassified	Rusa timorensis
JF304765	Saimiri sciureus papillomavirus 1	SscPV1	Dyoomikronpapillomavirus	Dyoomikronpapillomavirus 1	Saimiri sciureus
JF304766	Saimiri sciureus papillomavirus 2	SscPV2	Dyoomikronpapillomavirus	Dyoomikronpapillomavirus 1	Saimiri sciureus
JF304767	Saimiri sciureus papillomavirus 3	SscPV3	Dyoomikronpapillomavirus	Dyoomikronpapillomavirus 1	Saimiri sciureus
EF395818	Sus scrofa papillomavirus 1	SsPV1	Dyodeltapapillomavirus	Dyodeltapapillomavirus 1	Sus scrofa
KY817993	Sus scrofa papillomavirus 2	SsPV2	Unclassified	Unclassified	Sus scrofa
K02708	Sylvilagus floridanus papillomavirus 1	SfPV1	Kappapapillomavirus	Kappapapillomavirus 2	Sylvilagus floridanus

KC460987	<i>Talpa europaea</i> papillomavirus 1	TePV1	<i>Dyophipapillomavirus</i>	<i>Dyophipapillomavirus 1</i>	<i>Talpa europaea</i>
AY609301	<i>Trichechus manatus latirostris</i> papillomavirus 1	TmPV1	<i>Rhopapillomavirus</i>	<i>Rhopapillomavirus 1</i>	<i>Trichechus manatus latirostris</i>
JN709473	<i>Trichechus manatus latirostris</i> papillomavirus 2	TmPV2	<i>Rhopapillomavirus</i>	<i>Rhopapillomavirus 1</i>	<i>Trichechus manatus latirostris</i>
KP205502	<i>Trichechus manatus</i> papillomavirus 3	TmPV3	<i>Rhopapillomavirus</i>	<i>Rhopapillomavirus 2</i>	<i>Trichechus manatus latirostris</i>
KP205503	<i>Trichechus manatus</i> papillomavirus 4	TmPV4	<i>Rhopapillomavirus</i>	<i>Rhopapillomavirus 2</i>	<i>Trichechus manatus latirostris</i>
EU240894	<i>Tursiops truncatus</i> papillomavirus 1	TtPV1	<i>Upsilonpapillomavirus</i>	<i>Upsilonpapillomavirus 1</i>	<i>Tursiops truncatus</i>
AY956402	<i>Tursiops truncatus</i> papillomavirus 2	TtPV2	<i>Upsilonpapillomavirus</i>	<i>Upsilonpapillomavirus 2</i>	<i>Tursiops truncatus</i>
EU240895	<i>Tursiops truncatus</i> papillomavirus 3	TtPV3	<i>Upsilonpapillomavirus</i>	<i>Upsilonpapillomavirus 1</i>	<i>Tursiops truncatus</i>
JN709469	<i>Tursiops truncatus</i> papillomavirus 4	TtPV4	<i>Upsilonpapillomavirus</i>	<i>Upsilonpapillomavirus 1</i>	<i>Tursiops truncatus</i>
JN709470	<i>Tursiops truncatus</i> papillomavirus 5	TtPV5	<i>Omikronpapillomavirus</i>	<i>Omikronpapillomavirus 1</i>	<i>Tursiops truncatus</i>
JN709471	<i>Tursiops truncatus</i> papillomavirus 6	TtPV6	<i>Omikronpapillomavirus</i>	<i>Omikronpapillomavirus 1</i>	<i>Tursiops truncatus</i>
JN709472	<i>Tursiops truncatus</i> papillomavirus 7	TtPV7	<i>Upsilonpapillomavirus</i>	<i>Upsilonpapillomavirus 1</i>	<i>Tursiops truncatus</i>
DQ180494	<i>Uncia uncia</i> papillomavirus 1	UuPV1	<i>Lambdapapillomavirus</i>	<i>Lambdapapillomavirus 1</i>	<i>Uncia uncia</i>
EF536349	<i>Ursus maritimus</i> papillomavirus 1	UmPV1	<i>Omegapapillomavirus</i>	<i>Omegapapillomavirus 1</i>	<i>Ursus maritimus</i>
KF857586	<i>Vulpes vulpes</i> papillomavirus 1	VvPV1	<i>Treisetapapillomavirus</i>	<i>Treisetapapillomavirus</i>	<i>Vulpes vulpes</i>
HQ293213	<i>Zalophus californianus</i> papillomavirus 1	ZcPV1	<i>Dyonupapillomavirus</i>	<i>Dyonupapillomavirus 1</i>	<i>Zalophus californianus</i>