

A Parvovirinae

C594 TILLTGPASTGKSLATKICLQVNGVCYNAVNFPNDCSNKLWIWEEAGNFTQVNQFKTMTSGSIRLDQ
M2Z4 GCWIWGPMANTGKSMGFSINHFFPTGVGPKDNPNSFPFNNCVNRVIFWEEPQITNDIENDVKCLMSGNTFDT
Y7D7 CVMMWGPGANTGKTLMESIFTYFGNNVGRPDNSSPFNCVNRVIFWEEPQISNFNGVNEAVKLFNSQGTSFTD
8PD7 CVFLIGVSNAGKTVMPIKLENMLMINVRINNINGSIFIENCISCNLISIEECCVPVQWVDD1KRIFFGENNMIDC
PorPV TILFHGPASTGKSI1IAHQHIANLVGNVCGYNAANVNFPNDCTAKNLWIIEEAGNFSQNQVKAICSGQTID
CMVg3 TINFYGPASTGKTNLA1KAIANAQVLYCVHNQHQNKFNFNDCTAKLICL1CWEECIMTDDWVQEAKICMGGTQFRID
CMV TINFYGPASTGKTNLAQ1AIVNAQVLYCVHNQHQNKFNFNDCTAKLICL1CWEECIMTDDWVQEAKICMGGTQFRID
PorBV TLCFYGPASTGKTNLA1KSI1VQACKLYCVHNQHQNKFNFNDCTAKLICL1GLGTECFRDI
HumanBV TFCFYGPASTGKTNMA1KIQV1GRLYCVHNQHQNKFNFNDCTAKLICL1GLGTECFRDI
AAV5 TWLYGPATTGKTN1IAEA1IAHTVPFYGVCVNWTNENFPNDCDVKMLIWEEGKMTNKVVSEAKA1LGGSKVVRVD
AAVG01 TWLYGPATTGKTN1IAEA1IAHTVPFYGVCVNWTNENFPNDCDVKMLIWEEGKMTNKVVSEAKA1LGGSKVVRVD
BoAAV TWLYGPATTGKTN1IAA1SHTVPFYGVCVNWTNENFPNDCDVKMLIWEEGKMTSKVVEPA1LGGSKVVRVD
AleutMDV CIWFYGGTTGKTLASLICKATVNQMVITTSNPNFPWDGCRNRIIWAEBCCNFGNWEDFKA1TGGGDVVKD

B Picornaviridae

AichiV PEPPVVYLYGPPASLAAQLTSRQLAGTCYEFDGYTGQTVHFIIDIGEDEGRDWNFNPVLVSAPFIVPMAS
SenecaVV PEPPVVVRLGRKPTSLIAQAVSKRLYGSPDFDGYKGQFVTLMDLGQNDQDFSTFCQVMSTAFLPNMA
Saffoldv PEPPVVVLRGKNSAQIJAQAVSKLSFGRSRDLYDGQEYNSVIMDLDLGQNDGDFKVFQCMVSSTNLFNMAH
HumEV IEPVCLIRGSPTGIIARAIADKYHSSPDHFHDGYKQQVVTMDDLCQNQGDMSLFCQVMSTVDFIPPMAS
AvianSV FEPGIMLWLHGKPTISLGRQLCKMMGKPDHFHDGYTQEYVVMIDLQNGDKDALLCQMISTTEFIPPMAS
HePAv CEPVVCLYLGKRSALATKICKHGVESWDYHGSQVLVIIIDGQNTEDDWSDFQLVSGCPMLRNMAS
AvianEV AEPTVLYLGNRNSMIAVAKLCKELGQISSLDDFGWYDQAGQPVVIMDDLQGSDEDWWFNCQVLSSPLRNMAN
EquineRBV PEPVCILLGRKAATVIAKAVSIVNTGKSDFFDGYAGQNVVIMDDLQGSDEDWWFNCQVLSSPLRNMAN
FootMDV PEPPVVVCLRGKSANVLAQIAISHTFGRPHDGFYQNNQAVVMMDDLGQNDGDFRNCQVMSTSFLFPVPMAS
PortTV1 PEPPVVVLRGAPSEMLARMLSYLVLTGKTKHFDGYKQVAITIIDDLQGSDEDWWFRCQVLSTTCEIVPMAD
HumPV1 VEPIGIWIGEPEHTLSQLQKSCNLKQHDFYQDNDQHIL1DDLGQTKBKEKDIEMLNCSISVPFIVPMAH
DuckHAV PEPLGIWISGGPSNYIVKIEAKLHKHWKSKHMDGYVSQEIHVFDDFGQNEEEDYSLICLNLISSVFPITPKAS
O15N SEPVGIFWGLDNNALPRLVLPKRVKGWHYEWLDYQGQFVFLDLQVDEEDPMVILRAINSVRPMINKAH
BV10 VNSLYQHLKQGXSYIIPANESESFSHSNNDKYLTYNRQVQVPLTIDDLQFDQNDCPINSLANLMNISWCSHYTNQA
C141 QEPIGIVLQGPFPNGVQLCPLPMTRYAHQKDFDAYENESIFYMDDVQGQQGIAQWRFTFINMISRSQIPLGLCS

C *Picobirnaviridae* - segment 1

HPV_1gp2	TRLPIFGIVCMVNFTPTPGESYKNKSPNIAAQNVTYTVRHMMNSGHANVE
RPV_hypo	ANVFVGAGNAMYLPSFGI1STVLDGLSMAANLYA1VRKNSGKNGAYVE
5K8	ASFPYLVGLWINMPTIGNSFDVTLVINAVINASINTYTK1RHDNSGHANVD
C530	GSISFVGIMCITYKPSPVGYSTYGHSAVNMAARNLYSFVRHANSHTNYD
BHEW	TSIDY1GVMSCHRFRRICELWNPDIVANAATQNSRQANSGKNSYD
XG64	1STTGDGSCMRFVTFYTDGFLDILVXGVIATAVLWLRHANFGCSNYD
8ATT	SGMSYVGIMLAMILPLFLGI1DEWFVLVNIARDKYMFIRYANLGYFNVD

segment 1

HPV YPGIQAEDVMQSYSRHLGMDNLEKQYVSQDCTYLRRWHHTDYRVQDMCGVGVYSTMRALG
BPV FFGIQVEDVQYQATSHGLEMMNETKQVSYKSHCVDFLRWRHHEDYQIAEGCVGVYSTYRALG
HPVh YPGITADKVMRSYTHLELMNSKQYESHTDCYLRRWHHTDYKTRVQDMCGVGVYSTARALG
HPVb YPGITVVDRVRSYSSHGPEMNPDKQSVSQKECTYLRRWHHQNRYRVGDGCVGVYSTYRALG
HPVc YPGINVVDDVDTYSAHQGEEMNPKDQVYVSCHKDCTYLRRWHHDYRISDVCVGCVGVYSTYRALG
HPV1 YPGITVVKDVTYSAHQGEEMNADPKQVYVSCHKDCTYLRRWHHDYRQZQDGCVGVYSTYRALG
HPVj YPGITVEDVQSYRSRHOGEEMNPDKQVYVSCHKDCVYLRRWHHTDYRKDGICGVGVYSTARALG
HPVg YPGISVEDVMQAYTSHGLEMMNESKQYASTHDCVYLRRWHDQSRYRVGDGCVGVYSTNRALG
HPVm YPGISVEDVMQAYTSHGLEMMNESKQYASTHDCVYLRRWHDVSYRVGDGCVGVYSTNRALG
HPVf YPGINVEDVTQVSYAHQGEEMNLTKQYASEDCTYLRRWHHTDYRINDVCVGCVGVYSTYRALG
HPV1 YPGITVEDVTRTSYSAHQGEEMNIKDQYASAHDDCTYLRRWHHDDYRVGDGCVGVGYATYRALG
HPVd FFGIDKVDDVTDYTSHRQGEEMNAKSQMVKSYKSHCVCVLLRWHSTKYTD1NRMVGCVYSTFRALG
HPVc IADMSEAQLVDYLKGFLGLPANPTKQTVSNDTTLFLQRMLNVGFNSSTLQGAYPTIRGLN
HPVk LADMDAKEVVDTYLGQYGLPANPTKQSVGETLTLFLQRYFRQGFVSGGVFGAYYPTIRALN
VZ58 YPGITADNVQMAQASHQDMNLKGQHVSCHKDCTYLRRCHQDDYRILKWCVGCVYSTYRALG
DMYV YPGIKBDDVVDIVTYTAHGSQKEMNPDKQY1SLRDCVYLRRWHMSDYMVRNNVCVGAYSTCRALG
C108 YPGCRVEDVWVQTYCSHGLEMLNDKQVYVSCHKDCTYLRWHHTDYRDRDGCVGVGYATMRALG
C98 FFGCISVEDVQTYSSHGLRMLNDKQVYVSCHKDCTYLRRWHHNEYRQDGCVGVGYATMRALG
C586 YPGITVVDRVRSYSSHGLEMMNPDKQSVSQKHECTYLRRWHHQNRYRVGDGCVGVYSTYRALG
C477 YPGIDVEAVMQAQMSSHGEEMNPDKQVYVSCHKDCVYLRRWHHDYIRVNVCVGCVGSTNRALG

D Dicistroviridae

BQCV GQVMLREKVQECLIEAAQKGILFIDTLKDERPKHKAHKSRSMSNPGIDYVWSKMYFNPIVAVLSEK
HPV KAIIQLRQQVEEISIQLAQVLRQFIDTLKDERPKHAKHTRMFSACPLDYIAKCMYFGGVVSLLQK
TV LAVEELEVKVEIDLAQVQFVYDADLKERPREKAHKTRAFSCLPCELEYAVCKMFQGIVVSILTKC
PSIV LALDLRKDVHEHIESLADGISSFIIDLKDERKAIKEAHKTRFLFSASPLYLICRMYLGGSVRLRJK
HCV RAGPVERCAKCIIDLANERFYIDFTLKDERRPIAKWWKTRFVFSACSDQYIACKQQYQIVGLLRTHF
DCV YALALRKDVQEQLIEDCSKGKISFVDTLKDERRDIAKVNTRVFSAPGHOFWFARFQYFLPAWIMHN
CPV RAQELRRDVEEIDLNCNGKIKEFVDTLKDERRPIEKVDTATRFSAGPQHFVAFRKYFLPFAAYLMMNF
KBV LNEQDVELAVQRLLQAAEGKRLWVDTLKDERRPIEKVQNTTRFSNGPMDFIAFRMYYLGFIHALMEN
IAVPB NEDNEVLAQVRRIQAAEGKLRLWVDTLKDERRPIEKVNQTRFSNGPMDFIAFRMYYLGFIHALMEN
ABPV LDEDDEVEFAVKTRIQNANGVRTWDTLKDERRPIEKVQDTTRFSNGPMDFITFRMYYLGFIHALMEN
SIV IDPDMQMVKHERIENAQGIRTWVDTLKDERRPIEKVDTTRFSNGPMDFIAFRMYYLGFIHALMEN
ALPK ACKQLMDWDLDEAQCQMDNRWPWDTLKDAPKPIAKANVTRFLTACPLHYILFRQYFLPAWIMHN
RPV YAVALRADVDKLETDINGTRPWDTLKDQKIAIAKANATRFLSAAPMHYIALRKVCAPFVAHLRSMPM
TSV DLKEHVEKIVDKAKDGFIVDVSFAATLKDERRPLKKVQATRFSNGQGLLARRYYLSDFHVMNT
MCDV ELKEHVELLIASKRGIVDETEFTADLKERPLAKVEATRFAATQNALLAQRRYFLSYLESLHVMLN
C1027 KAQEMKTIQVQDGQNVNGMKGGFVFTDTLKDERTPIEKVMETRFLAAAPMDFITFRMYYFMSFLAWMRNPF
C822 KAQEMKTIQVQDGQNVNGMKGGFVFTDTLKDERTPIEKVMETRFLAAAPMDFITFRMYYFMSFLAWMRNPF
C982 LNKLRLRKVTQVEEMLYGQVQFDTLKDTELPMKVEITRFAAAPMDFITFRMYYFMSFLAWMRNPF
GAS3 KALELRAIVDQLRVDNCNGVITCADTMKDERRPIAKVDTTRFSACPCMHPVLYSTYYVGFQAAIFHMNF
QUOG EAQQLRADVDELIEDCMVRFRSLLIKDERRKEKAVDVTTRFSAGPQHFVAFRKYFLPFAAWLHMNF
ZSM5 KRSNLRADVDELIEDCIGKLISSLKLDERRKEKAVDVTTRFSASWSTFRGVSQVLSPFAAWLHMNF
A2AD MALEVERRGQLLKQDCDGJQQRWSDTLKDERRPIEKVDTATRVECCGPVHFLILFRQYFLGFAAWIHMNF
C1164 DLINAITDFFENVKVEGLEPINFFIDQTKDERRPIEKVQATRMAFQIGNMLTBLVIRQYFWSDFSEMKKQJ
C1018 DLINAITDFFESVKVEGLEPINFFIDQTKDERRPIEKVQATRMAFQIGNMLTBLVIRQYFWSDFSEMKKQJ
C849 DLINAITDFFENVKVEGLEPINFFIDQTKDERRPIEKVQATRMAFQIGNMLTBLVIRQYFWSDFSEMKKQJ
C904 DLINAITDFFENVKVEGLEPINFFIDQTKDERRPIEKVQATRMAFQIGNMLTBLVIRQYFWSDFSEMKKQJ