

GenBank: Z46390.1

Go to:

DEFINITION Avian leukosis virus HPRS103 (subgroup J) complete proviral sequence.

VERSION Z46390.1

SOURCE Avian leukosis virus HPRS103

REFERENCE 1 (bases 1 to 7841)

TITLE HPRS-103 (exogenous avian leukosis virus, subgroup J) has an env
gene related to those of endogenous elements EAV-0 and E51 and an

JOURNAL J. Virol. 69 (2), 779-784 (1995)

REFERENCE 2 (bases 1 to 7841)

TITLE Direct Submission

FEATURES	Location/Qualifiers
----------	---------------------

```
repeat region 1..325
```

```
/note="5' LTR"
```

```
/rpt type=long terminal repeat
```

```
repeat region 1..224
```

```

        /standard_name="U3"
        /rpt_type=DIRECT
5'UTR      225..603
repeat_region 225..245
        /standard_name="R"
        /rpt_type=DIRECT
repeat_region 246..325
        /standard_name="U5"
        /rpt_type=DIRECT
gene      order(604..621,5302..6993)
        /gene="env"
CDS      join(604..621,5302..6993)
        /gene="env"
        /codon_start=1
        /product="envelope protein subgroup J"
        /protein_id="CAA86525.1"
        /db_xref="GOA:Q64997"
        /db_xref="InterPro:IPR005166"
        /db_xref="InterPro:IPR018154"
        /db_xref="UniProtKB/TrEMBL:Q64997"
        /translation="MEAVIKAFLTGHPGKVSKKDSKKKPPATSKKDPEKTPLLPSRGY
FFFQMILVVCVIIISVVPGVGGVHLLQQPGNVVVTWANKTGRDTDFCLSLQSATSPFRTC
LIGIPQYPLNTFKGYVTNVTACDNNNDLASQTACLIKALNTTLPWDPQELDILGSQMI
KNGTTRTCVTFGSVCYKENNRSRVCHNFDGNVNGTGAERELRDFIAKWKSDLLIRP
YVNQSWTMVSPINVESFSISRRCGFTSNETRYRGLDSNWCSSKRGWSAGYSNGTK
CSSNTTGCGGNCTTEWNYAYGFTFGEQPEVLWNNGTAKALPPGIFLICGDRAWQGIP
RNALGGPCYLGLTMLSPNFTTWITYGPNITGHHSRRSLSRSLSPDCGDELQLWSVTA
RIFASFFAPGIAAAQALKEIERLACWSVKQANLTSILNAMLEDTSIRHAVLQNRAA
IDFLLLAQGHGCQDVEGMCCFNLSDHSESIHKALQAMKEHTEKIRVEDDPIGDWFTRT
FGDLGRWLAKGVKTLFALLVIACLLAIIPCVIKCFQDCLSRMTNQFMDERIRYHRIR
EQL"
mat_peptide 5476..6399
        /gene="env"
        /product="gp85 (SU) domain of env (sugroup J)"
mat_peptide 6400..6990
        /gene="env"
        /product="gp37 (TM) domain of env (sugroup J)"
CDS      604..2709
        /codon_start=1
        /product="gag proteins"
        /protein_id="CAA86524.1"
        /db_xref="GOA:Q64996"
        /db_xref="HSSP:1D1D"
        /db_xref="InterPro:IPR000721"

```

```

/db_xref="InterPro:IPR001878"
/db_xref="InterPro:IPR001969"
/db_xref="InterPro:IPR001995"
/db_xref="InterPro:IPR004028"
/db_xref="InterPro:IPR008916"
/db_xref="InterPro:IPR008919"
/db_xref="InterPro:IPR009007"
/db_xref="InterPro:IPR010999"
/db_xref="InterPro:IPR012344"
/db_xref="InterPro:IPR013084"
/db_xref="InterPro:IPR018061"
/db_xref="InterPro:IPR021109"
/db_xref="UniProtKB/TrEMBL:Q64996"
/translation="MEAVIKVISSACKTYCGKTSPSKKEIGAMLSLLQKEGLLMSPSD
LYSPGSWDPITAALSQRAMVLGKSGELKTWGLVLGALKAAAREEQVTSEQAKFWLGLGG
GRVSPPGPECIEKPATERRIDTGEEARETTVQQDAKMAPEETATPKTVGTSCYHCGTA
IGCNCATASAPPPPYVGSGLYPSLAGVGEQQGQGGDTPRGAEQPRAEFGHAGLAPGA
LTDWARIREELASTGPPVVAMPVVIKTEGPAWTPLEPKLITRLADTVRTKGLRSPITM
AEVEALMSSPLLPHDVTNLMRVILGPAPYALWMDAWGVQLQTVIAAATRDPRHPANGQ
GRGERTNLDRLKGLADGMVGNPQQAALLRPGELVAITASALQAFREVARLAEPAGPW
ADITQGPSESFVDFANRLIKAVEGSDLPPSARAPVIIDCFRQKSQPDIIQLIRAAPST
LTPGGEIIKYVLDRQKTAPLTDQGIAAAMSSAIQPLVMAVNVNRERDGGQTGSGGRARGL
CYTCGSPGHYQAQCPKKRKSGNSRERCQLCDGMGHNARQCRKRDGNQGRPGRGLSSG
PWPAPPEPPAVSLAMTMEHRDRPLVRVILTNTGSHPVKQRSVYITALDLSGADITIISE
EDWPTDWPVVD TANPQIHGIGGGIPMRKSRDMIELGVINRDGSLERPLLLFPAMVR
GSILGRDCLQGLGLRLTNL"

```

```

mat_peptide      604..1068
/product="matrix protein, MA p19"
mat_peptide      1069..1134
/product="p2"
mat_peptide      1135..1320
/product="p10"
mat_peptide      1321..2037
/product="capsid protein, CA p27"
mat_peptide      2068..2334
/product="nucleocapsid protein, NC p12"
mat_peptide      2335..2706
/product="protease, PR p15"
intron           622..5301
mat_peptide      2727..5348
/gene="env"
/product="pol proteins"
mat_peptide      2727..4442
/gene="env"

```

```

        /product="reverse transcriptase beta-subunit, RT p68"
mat_peptide      4443..5300
        /gene="env"
        /product="integrase, IN p32"
misc_feature      6796..7015
        /note="insertion encoding transmembrane segment of TM"
3'UTR            6994..7741
misc_feature      7016..7225
        /note="redundant, non-functional TM"
misc_feature      7266..7358
        /note="DR1"
misc_feature      7359..7505
        /standard_name="E or XSR element"
repeat_region     7517..7841
        /note="3' LTR"
        /rpt_type=long_terminal_repeat
repeat_region     7517..7742
        /standard_name="U3"
        /rpt_type=DIRECT
repeat_region     7743..7763
        /standard_name="R"
        /rpt_type=DIRECT
repeat_region     7764..7841
        /standard_name="U5"
        /rpt_type=DIRECT

```

ORIGIN

```

1  tgtagtggtta tgcaatactc ttatgtaacg atgaaacagc aatatgcctt ataaggaaga
61  aaaaggcact gtacacgtcg attggtggaa gtaagggtgt atgatcatgg tatgatcggt
121 ccttattagg aaggcaacag acgggtctta catggattgg acgaactcct tagttccgca
181 ttacagagat attgtattta agtgcctagc cgcacacaat aaacgccatt ttacctcca
241 ccacattggt gtgcacctgg gttgatggcc ggaccgtcga ttccctgaca actacgagca
301 cctgcatgaa gcggatggct tcatttggtg accccgatgt gatagttagg gaatagtggg
361 cggccacaga cggcgtggcg atcctgtcct catccgtctc gcttattcgg ggagcgggcg
421 atgaccctag tagagggggc tgcggcttag gagggcagaa gctgagtggc gtcggaggga
481 gctctactgc agggagccaa cataccctac cgagcactca gagagtgcct ggaagacggc
541 aaggaagccc gacgactgag cggtcgccc cagacgtgat tctggtcgcc cggaggatca
601 agtatggaag ccgtcataaa ggtgatttcg tccgcgtgta aaacctattg cggaaaaacc
661 tctccttcta agaaggaaat cggggccatg ttgtccctct taaaaagga agggttgctt
721 atgtctccct cagacttata ctccccgggg tcctgggatc ccatcactgc ggcgctctcc
781 cagcgggcaa tggtagcttg aaaatcgggg gagttaaaaa cctggggatt ggtgttgggg
841 gcattgaagg cggctcgaga ggaacaggtt acatctgagc aagcaaagtt ttggttgggg
901 ctagggggag ggagggtctc tccccaggt ccggagtgtg tcgaaaaacc agcaacggag
961 cggcggatcg acacagggga ggaagcgaga gagacaactg tgcagcaaga tgcgaagatg
1021 gcgccggagg aaacggccac acctaaaacc gttggcacat cctgctatca ttgcggaaca

```

1081 gctattggct gtaattgcgc cacagcctcg gcccctcctc ctccttatgt ggggagtggg
1141 ttgtatcctt ccctggcggg ggtgggagag cagcagggcc aggggggtga cacacctcgg
1201 ggggcggaac agccaagggc ggagccaggg cacgcgggtc tggcccctgg gccggccctg
1261 actgactggg caaggatcag ggaggagctt gcgagtacag gtccgcccgt ggtggccatg
1321 cctgtagtga ttaagacaga gggacccgcc tggaccctc tggagccaaa attgatcaca
1381 agactggctg atacggtcag gaccaagggc ttacgatccc cgatcactat ggcgagggtg
1441 gaagcgctta tgtcctcccc gctgctgccg catgacgtta cgaatctaatt gagagtattt
1501 ttaggacctg ccccatatgc cttgtggatg gacgcttggg gtgtccaact acagacggtt
1561 atagcggcag ccactcgcga cccccgacac ccagcgaatg gtcaagggcg gggggaacgg
1621 actaatattg atcgcttaaa gggtttagct gatgggatgg tgggcaaccc gcagggtcag
1681 gccgcattat taagaccggg ggaattggtt gctattacgg cgtcggctct ccaggcattt
1741 agagagggtt cccggctggc ggaacctgct ggtccatggg cggacattac gcagggacca
1801 tctgagtcct ttgttgattt tgccaatcgg cttataaagg cggttgaggg gtcagatctc
1861 ccgccttccg cgcgagctcc ggtgatcatt gactgcttta ggcagaagtc acagccagat
1921 atccagcagc ttatacgggc agcaccctcc acgctgacca cccaggaga gataatcaaa
1981 tatgtgctag acaggcagaa gactgcccct cttacggatc aaggcatagc cgcggccatg
2041 tcgtctgcta tccagccctt agttatggca gtagtcaata gagagaggga tggacaaaact
2101 gggtcgggtg gtcgtgcccg agggctctgc tacacttgtg gatccccggg acattatcag
2161 gcgcagtgcc cgaaaaaacg aaaatcagga aacagccgtg agcgatgtca gttgtgtgac
2221 gggatgggac acaacgctag acagtgtagg aagcgggatg gcaaccaggg ccaacgcca
2281 ggaagaggtc tctcttcggg gcggtggccc gcccctgagc cgctgcccgt ctcgttagcg
2341 atgacaatgg aacatagaga tcgccccttg gttagggta ttctgactaa cactgggagt
2401 catccggtca aacagcgtc ggtgtatatc accgcgctgt tggactccg agcggacatc
2461 actattattht cggaggagga ctggcctact gattggccgg tgggtggacac cgcgaaccca
2521 cagatccatg gcataggagg gggaattccc atgcgaaaat ctcgtgacat gatagagtta
2581 ggggttatta accgagacgg gtctttggag cgaccctgc tctcttccc cgcagtagct
2641 atggttagag ggagtatcct gggaagagat tgtctgcagg gcctagggct ccgcttgaca
2701 aatttataggg gagggccact gttcttactg ttgcgctaca tctggctatt ccgctcaaat
2761 ggaagccaga ccacacgcct gtgtggattg accagtggcc ccttcctgag ggtaaaacttg
2821 tagcgctaac gcaattagt gaaaaagaat tacagttagg acatatagaa ccttcactta
2881 gttgtttgaa cacacctgtc tttgtgatcc ggaaggcttc tgggtcttat cgtttattgc
2941 atgacttgcg cgctgttaac gccaaagctt ttccttttgg gcccgccaa cagggggcgc
3001 cagttctctc cgcgctccc gctggctggc ccctgatggt cctagacctc aaggattgct
3061 ttttttctat tctcttgcg gaacaagatc gcgaagcttt tgcatttacg ctcccctctg
3121 tgaataacca ggccccgct cgaagattcc aatggaaggt cttgccccaa gggatgacct
3181 gttctccac tatctgtcag ttgatagtgg gtcagggtact tgagcccttg cgactcaagc
3241 acccatctct gcgcatgttg cattacatgg atgatctttt gctagccgcc tcaagtcatg
3301 acaggttgga agcggcaggg gaggaggtta ttagtacact ggaaagagcc gggttcacca
3361 tttcgcctga taaggccaa agggagcccg gagtacaata tcttgggtac aagttaggca
3421 gtacgtatgt agcaccgta ggtctgtag cagaaccag gatagccacc ttgtgggatg
3481 ttcaaaagct ggtgggatca cttcagtggc ttcgccctgc attaggaatc ccgccacgac
3541 tgatggggcc cttttatgag cagttgcggg ggtcagacct taacgaggcg agggaatgga
3601 atctagacat gaaaatggc tggagagaga ttgtacagct cagcaccact gctgccttgg
3661 aacgatggga ccctgccctg cctctggaag gagcggtcgc tagatgtgaa cagggggcaa

3721 taggggtcct gggacagga ctgtccacac acccaaggcc atgcttgtgg ttattctcca
3781 cccaaccac caaggcgttt actgcttggt tagaagtgct cacccttctg attactaagc
3841 tacgtgcttc ggcagtgcgg acctttggca aagagggtga taccctcctg ttgcctgcat
3901 gctttcggga ggaccttccg ctgccggagg ggatcctgct agcccttaag ggatttgcat
3961 gaaaaatcag gagtagtgat acgccatcta tctttgacat tgcgcgtcca ctgcatgttt
4021 ctctgaaagt gagggttacc gaccaccctg tgctaggacc cactgtcttt actgacgcct
4081 cctcaagcac ccataagggg gtggtagtct ggaggagggg cccaagggtg gagataaaag
4141 aaatagctga tttgggagca agtgtacaac aactggaggc acgcgctgtg gccatggcac
4201 ttctgctgtg gccgacaacg ccacgaatg tagtgactga ctccgcgttt gttgcgaaaa
4261 tgctactcaa gatgggacag gagggagtcc cgtctacagc ggcggtttt attttagagg
4321 atgcgttaag ccaaaggcca gccatggcgc ccgttctcca cgtgcggagt cattctgaag
4381 tgccagggtt tttcacggaa ggtaatgacg tggcagatag ccaagccacc tttcaagcgt
4441 atcccttgag agaggctaaa gatcttcata ccgctctcca tattggacct cgcgcgtat
4501 ctaaagcgtg taatatatct atgcagcagg ctaggagggt tgttcagacc tgcccgcatt
4561 gtaattcagc ccctgcgttg gagggcgggg taaaccctag gggtttggga cccctacaga
4621 tatggcagac agactttacg cttgagccta gaatggcccc ccgttccttg cttgctgtta
4681 ctgtggatac cgcctcatca gcgatagtcg taactcagca tggcgtgtc acatcgttg
4741 ctgcacaaca tcattgggcc acggctatcg ccgttttggg aagaccaaag gccataaaaa
4801 cagataatgg gtctgtctc acgtctaaat ccacgcgaga gtggctcgcg agatggggga
4861 tagcacacac caccgggatt ccaggtaatt cccagggtca agctatggta gagcgggcca
4921 accggctcct gaaggataag atccgtgtgc ttgcggaggg ggacggcttt atgaaaagaa
4981 tccccaccag caaacagggg gaactactag ccaaggcaat gtatgccctc aatcactttg
5041 agcgtggtga aaacacaaaa acaccaatac aaaaacactg gagacctacc gttcttacag
5101 aaggaccccc ggttaagata cgaatagaga caggggagtg ggaaaaagga tggaaactgc
5161 tagtctgggg acgaggttat gccgtgtga aaaacaggga cactgataag gttatttggg
5221 taccttctcg gaaagttaaa ccggacatca cccaaaagga tgaggtgact aagaaagatg
5281 aggcgagccc tctctttgca ggcatttctg actgggcacc ctgggaaggt gagcaagaag
5341 gactctaaga agaagccgcc agcaacaagc aagaaagacc cggagaagac acccttgctg
5401 ccatcgagag gttacttctt ctttcaaagt atacttgtgt gcgtggttat tatttccgtt
5461 gtcccagggg tggggggagt tcatctattg caacaaccag gaaactgtgt gggtcacctg
5521 gcaataaga cgggccgaac agatttttgc cttagtctac agtcagcgac ctcaccattc
5581 cgcacctgct tgataggcat tccacagtat cctctgaaca cctttaaggg atatgtcact
5641 aatgttactg cttgcgataa caacaccgat ttagccagcc aaacagcatg cttgataaag
5701 gctctaaata caaccctccc ttgggacccc caagaattgg atatttttag gtcccagatg
5761 atcaagaacg gaacaacacg tacgtgtgtt acctttggtt cgggtgtgcta taaagagaac
5821 aatcgcagta gagtctgtca caattttgat gggaatgtta atgggactgg tggggcggaa
5881 cgagagttgc gtgacttcat agcaaaatgg aaaagtgatg accttcttat aaggccctat
5941 gtcaaccaat catggacgat ggtaagtcca ataaacgtag agagtttttc aataagtcgt
6001 agatattgtg gattcaccag taacgagact cgttactata gaggggacct ttctaattgg
6061 tgtagttcaa aaaggggaga atgggtcagc gggtagagca acgggacaaa atgttccagc
6121 aacacgacgg gttgtggtgg taattgcaca acggaatgga attattatgc atatgggttt
6181 accttcgggg aacagccaga ggtgttgtgg aacaatggga ctgctaaggc actcccacca
6241 ggtattttct tgatttgtgg ggacagggtc tggcaaggca tcccgctaa tgcttggga
6301 gggccctggt atctaggaca attgactatg ctctctccta actttaccac ctggataaca

6361 tatgggccga acattacggg tcaccaccgt agcaggcgct cgctgagtcg tctctcgctt
6421 gactgcggtg atgagctaca gctatggagt gtgacagccc ggatatttgc ttctttcttt
6481 gctcctggta tagcagcagc acaggcctta aaggagatcg agcgattggc atgttggtcg
6541 gttaagcaag cgaatttaac atcattaata ttgaatgcga tgctggagga tacaagcagt
6601 atccggcacg cagtgttgca gaatcgagca gccatcgatt tcttactcct ggcgcagga
6661 cacgggtgtc aagacgtaga agggatgtgc tgcttcaatc tcagcgatca tagtgagtcc
6721 attcataagg cgctccaagc catgaaggaa catacagaga agatacgggt ggaagatgat
6781 cccatagggg attggtttac gcgcacgttt ggtgatctag gaagggtggct cgcgaaagg
6841 gttaagacgc tactgtttgc cttgcttgtc atagcctgtc tattagctat cattccatgt
6901 gtaatcaagt gctttcagga ttgtctatcg agaacaatga atcagtttat ggatgaacgc
6961 ataagatatc atagaattag ggagcagctg taggttccga acgcgatgtg acgggaggct
7021 gcgagggata tccggaggaa taggagaatg ggccgttcat ttgctgaaag gactgctttt
7081 ggggcttggt gtaatgtgcc tgccttgcc tttgcaattt gtgtccagta gcatccgaag
7141 gagtattaat aattcaatca gctatcacac ggaatataag aagttgcaaa aggcctgtag
7201 gcagcccaaa aatggggcaa tgtaaagcag tgcattggga ggggtatgaa acttgcaaat
7261 cgggctgtaa cggggcaagg cttgactgag gggactgcag catgtatagg cgctgggcgg
7321 ggcttcggtt gtacgcggat aggaatcccc tcaggacaat tctgcttgaa atatgatggc
7381 acctcccta ttgtgccctt agactattca agttgcctct gtggattagg actggaggca
7441 gctcggatgg tctgatggcc aaatagagca agctagatag gtaactgcga aatacgcttt
7501 tgcattagga gggggaaatg tagtgttatg caatactctt atgtaacgat gaaacagcaa
7561 tatgccttat aaggaagaaa aaggcactgt acacgtcgat tggtggaagt aagggtgtat
7621 gatcatggta tgatcgtgcc ttattaggaa ggcaacagac gggctttaca tggattggac
7681 gaactcctta gttccgcatt acagagatat tgtatttaag tgcctagccc gacacaataa
7741 acgccatttt acctcccacc acattgggtg gcacctgggt tgatggccgg accgtcgatt
7801 ccctgacaac tacgagcacc tgcattgaag ggatggcttc a

//