

Human papilloma virus type 59, complete viral genome

GenBank: X77858.1

[FASTA Graphics](#)

[Go to:](#)

LOCUS X77858 7896 bp DNA linear VRL 18-APR-2005

DEFINITION Human papilloma virus type 59, complete viral genome.

ACCESSION X77858

VERSION X77858.1

KEYWORDS complete genome.

SOURCE human papillomavirus 59

ORGANISM [human papillomavirus 59](#)

Viruses; Monodnaviria; Shotokuvirae; Cossaviricota;
Papovaviricetes; Zurhausenvirales; Papillomaviridae;
Firstpapillomavirinae; Alphapapillomavirus.

REFERENCE 1

AUTHORS Rho,J., Roy-Burman,A., Kim,H., de Villiers,E.M., Matsukura,T. and
Choe,J.

TITLE Nucleotide sequence and phylogenetic classification of human
papillomavirus type 59

JOURNAL Virology 203 (1), 158-161 (1994)

PUBMED [8030272](#)

REFERENCE 2 (bases 1 to 7896)

AUTHORS Choe,J.

TITLE Direct Submission

JOURNAL Submitted (25-FEB-1994) J. Choe, C/O Hajo Delius, DKFZ - Abt.
ATV,

Im Neuenheimer Feld 506, 69120 Heidelberg, FRG

FEATURES Location/Qualifiers

source 1..7896

/organism="human papillomavirus 59"

/mol_type="genomic DNA"

/db_xref="taxon:[37115](#)"

gene 55..537

/gene="ORF putative E6"

CDS 55..537

/gene="ORF putative E6"

/codon_start=1

/protein_id="[CAA54849.1](#)"

/db_xref="GOA:[Q81964](#)"

/db_xref="InterPro:[IPR001334](#)"

/db_xref="UniProtKB/TrEMBL:[Q81964](#)"

/translation="MARFEDPTQRPYKLPDLSTTLNIPLHDIRINCVFCKGELQEREV
FEFAFNDLFIVYRDCTPYAACLKCSFYARVRELRYRDSVYGETLEAETKTPLHELL
IRCYRCLKPLCPTDKLKHITKRRFHNIAGIYTGQCRGCRTRARHLRQQRQARSETLV

```

"
gene      542..865
          /gene="ORF putative E7"
CDS       542..865
          /gene="ORF putative E7"
          /codon_start=1
          /protein_id="CAA54850.1"
          /db_xref="GOA:Q81965"
          /db_xref="InterPro:IPR000148"
          /db_xref="UniProtKB/TrEMBL:Q81965"
          /translation="MHGPKATLCDIVLDLEPQNYEEVDLVCYEQLPDSSENEKDEPD
GVNHPLLLARRAEPQRHNIVCVCKCENNQLQLVVETSQDGLRALQQLFMDTLSFVCPL
CAANQ"
gene      872..2806
          /gene="ORF putative E1"
CDS       872..2806
          /gene="ORF putative E1"
          /codon_start=1
          /protein_id="CAA54851.1"
          /db_xref="GOA:Q81966"
          /db_xref="InterPro:IPR001177"
          /db_xref="InterPro:IPR014000"
          /db_xref="InterPro:IPR014015"
          /db_xref="InterPro:IPR016393"
          /db_xref="UniProtKB/Swiss-Prot:Q81966"
          /translation="MADSEGTDGEGTGCNGWFFVQAIVDKKTGDKISDDEDENATDTG
SDLVDFIDDTTITICVQAERETAQALFNVQEAQRDAREMHVLKRKFGCSIENSSEKAAA
GKKAKSPLQEISVNVNHPKVKRRLITVPDSGYGYSEVEMLETQVTVENTGNGDSNGSV
CSDSQIDCSDSSNMDVENIVPTSPTNQLQLLHSKNKAAMYAKFKELYGLSFQDLVR
TFKSDRTTCSDWVTAIFGVNPTVAEGFKTLIQPYVLYAHIQCLDCAWGVVILALLRYK
CGKNRITVAKGLSTLLHVPDTCMLIEPPKLRSGVAALYWYRTGMSNISEVIGETPEWI
QRLTIIQHGVDDSVFDLSEMIQWAFDNDLTDES DIAYEYALIADSNSNAAFLKSNCQ
AKYLKDCAVMCRHYKRAQKRQMSMSQWIKWRCDKIEEGGDWKPIVQFLRYQGVEFITE
LCALKDFLKGTPKRN CIVLCGPANTGKSYFGMSLLHFLQGTVISHVNSNSHFWLEPLT
DRKLAMLDATDSCWTYFDTYMRNALDGNPISVDRKHRHLVQIKCPPMLITSNTNPVT
DNRWPYLNRLMVFKFPNKL PFDKNRNPVYTINDRNWKCF FERTWCRLDLNEEEEDAD
SDGHPFAAFKCVTGSNIRTL"
gene      2736..3848
          /gene="ORF putative E2"
CDS       2736..3848
          /gene="ORF putative E2"
          /codon_start=1
          /protein_id="CAA54852.1"
          /db_xref="GOA:Q81967"

```

```

/db_xref="HSSP:1JJ4"
/db_xref="InterPro:IPR000427"
/db_xref="InterPro:IPR001866"
/db_xref="InterPro:IPR009021"
/db_xref="InterPro:IPR012677"
/db_xref="UniProtKB/TrEMBL:Q81967"
/translation="MQTVMDTLSQRSLVLDQDQILEHYENDSKDINEHINYWKLVRMEN
VILFAARENNIHTLNHQVVPFTFLVSKNKACEAIELQSNRTSTVMPCFLKHFLGAVCHS
SWHVS CIVHCSFLNSVCAKLSNAICSKENTMHYTSWTFIYYVNDVGQWCKTTGNVDFW
GLYYKVEEEQVYYVKFIHDAKKYGTDTKWEVHYNGKVIDCYDSMCSTSDEQVSTAGSS
EQLSYPSATPPEATYLGPOQTNWRQTKTGKRPRQCGYTQHPQSTSVSDYCDNPVVR LH
PGNNPRRHIPCSNTTPIIHLKGDKNGLKCLRYRLRKVHWLFENISSTWHWTGNRGS AK
TGILTLTYTSETQRNEFLDTVKIPNSVQIHVGYSV"
gene      3268..3615
/gene="ORF putative E4"
CDS       3268..3615
/gene="ORF putative E4"
/codon_start=1
/protein_id="CAA54853.1"
/db_xref="InterPro:IPR003861"
/db_xref="UniProtKB/TrEMBL:Q76QV7"
/translation="MMPKNMGLQTSGKCIIMARLLIVMTLCAVPVTSKYPLDLLSNY
HTPPQRPFPKPRTWAPKRGTVRRRLESDQDSVDTHSTLSLPACQWTTVTTQSSVCIQAT
TRDGTSLAVTLRL"
gene      3908..4129
/gene="ORF putative E5"
CDS       3908..4129
/gene="ORF putative E5"
/codon_start=1
/protein_id="CAA54854.1"
/db_xref="InterPro:IPR004270"
/db_xref="UniProtKB/TrEMBL:Q81969"
/translation="MITLVFVCCVCVCLCVCCNVPLLQSVYMCAYTWLLVFVYIVVIT
SSYECFLLYILFFIIPLLLLYAHAILS IQ"
gene      4231..5625
/gene="ORF putative L2"
CDS       4231..5625
/gene="ORF putative L2"
/codon_start=1
/protein_id="CAA54855.1"
/db_xref="GOA:Q81970"
/db_xref="InterPro:IPR000784"
/db_xref="UniProtKB/TrEMBL:Q81970"
/translation="MVSHRAARRKRASATDLYKTCKQAGTCPSDVINKVEGTTLADKI

```

LQWTSLGIFLGGLGIGTGSGTGGRTGYIPLGGRTNTIVDVSPAKPPVIEPVGPTDPS
IVTLVEDSSVITSGAPAPTFTGTSGFEISTSSSTTTPAVLDITPTSSVQISSSSFINPA
FTDPSVIEVPQTGEISGNILISTPTSGAHGYEEIPMQTFATEGTGLEPISSTPNPTVR
RVAGPRLYSRANQQVRVSNADFLTRPSTFVTYDNPAYDPIDTTLTDFDPSSEVPDPDFM
DIVRLHRPALTSRRSTVRFSSRLGQRATMFTRSGKQIGARVHFYHDISPIPHAEDIELQ
PLVSSQAATDDIYDIYADITDEAPTSTANTAFTIPKSSFQSLSLTRSASSTFSNVTVP
LATAWDVPVNTGPDIVLPNTNIVEPTYSTTPFTTIQSINIEGTNYFLWPIYYFLPRKR
KRVPYFFTDGSMAF"

gene 5606..7132

/gene="ORF putative L1"

CDS

5606..7132

/gene="ORF putative L1"

/codon_start=1

/protein_id="CAA54856.1"

/db_xref="GOA:Q81971"

/db_xref="HSSP:1DZL"

/db_xref="InterPro:IPR002210"

/db_xref="InterPro:IPR011222"

/db_xref="UniProtKB/TrEMBL:Q81971"

/translation="MALWRSSDNKVYLPSPSVAKVVSTDEYVTRTSIFYHAGSSRLLT

VGHYPYFKVPKGGNGRQDVPKVSAYQYRVFRVKLPDPNKFGLPDNTVYDPNSQRLVWAC

VGVEIGRGQPLGVGLSGHPLYNKLDDTENSHVASAVDTKDTRDNVSDYKQTQLCIIG

CVPAIGEHWTGKTACKPTTVVQGDCCPLELINTPIEDGDMVDTGYGAMDFKLLQDNKS

EVPLDICQSICKYPDYLQMSADAYGDSMFFCLRREQVFARHFWRNSRGTMGDQLPESLY

IKGTDIRANPGSYLYSPSPSGSVVTSDSQLFNKPYWLHKAQGLNNGICWHNQLFLTUV

DTTRSTNLSVCASTTSSIPNVYTPTSFKEYARHVEEFDLQFIFQLCKITLTTEVMSYI

HNMNTILEDWNFGVTPPPTASLVDTYRFVQSAAVTCQKDTAPPVKQDPYDKLKFWPV

DLKERFSADLDQFPLGRKFLQLGARPKPTIGPRKRAAPAPTSTPSPKRVKRRKSSRK

"

ORIGIN

1 gttaagaccg aaaacggtgc atataaaggt agttgaaaag aaaagggcaa cggcatggca
61 cgctttgagg atcctacaca acgaccatac aaactgcctg atttgagcac aacattgaat
121 attcctctgc atgatattcg catcaattgt gtgttttgca aaggggaact gcaagaaaga
181 gaggtatttg aatttgcttt taatgactta tttatagtgt atagagactg tacaccgtat
241 gcagcgtgtc tgaaatgcat ttcattttat gcaagagtaa gagaattaag atattataga
301 gattccgtgt atggagaaac attagaggct gaaaccaaga caccgttaca tgagctgctg
361 atacgctgtt atagatgcct aaaacctcta tgtccaacag ataaattaaa gcatataact
421 gaaaaaagaa gattccataa tatagctgga atatatacag gacagtgtcg tgggtgtcgg
481 acccgagcaa gacacctaag acagcaacga caagcgcgta gtgaaacact ggtgtaaaac
541 aatgcatgga ccaaaagcaa cactttgtga cattgtttta gatttggaac cacaaaatta
601 tgaggaagtt gaccttgtgt gctacgagca attacctgac tccgactccg agaatgaaaa
661 agatgaacca gatggagtta atcatccttt gctactagct agacgagctg aaccacagcg
721 tcacaacatt gtgtgtgtgt gttgtaagtg taataatcaa cttcagctag tagtagaaac
781 ctcgcaagac ggattgcgag ccttacagca gctgtttatg gacacactat cctttgtgtg

841 tcctttgtgt gcagcaaacc agtaacctgc aatggccgat tcggaaghta cagatgggga
901 agggacgggg tgcaatggat ggttttttgt gcaggcaata gtagataaaa aaacaggtga
961 caaaatttca gatgacgagg atgaaaatgc aacagatata ggttcagact tggtagatth
1021 tattgatgat accacaacaa tttgtgtaca ggcagagcgc gagacagcac aggccttgtt
1081 taatgtgcag gaagcccaaa gggatgcacg ggaaatgcat gttttaaaac gaaagtttgg
1141 gtgcagtata gaaaacagta gtgagaaaagc ggcggcagga aaaaaagcta agtcaccatt
1201 acaagaaata tcagtaaagt ttaaccaccc aaaagtaaaa agaaggthaa taacagtggc
1261 agacagcggc tatggctatt ctgaagtgha aatgctcag actcagghaa ccgtggagaa
1321 tactggaaat ggggatagca atggcagtgat ttgtagcgac agtcaaatag actgtagcga
1381 cagcagtaac atggatgttg aaaacatagt tccaacatcc cccactaatc aattgttaca
1441 gttattacat agcaaaaata agaaagcagc tatgtatgca aaattttaaag aattgtatgg
1501 gttatcattt caagatttgg ttaggacatt taaaagtgc agaaactacct gtagcgattg
1561 ggtaaccgcc attttttgtg ttaatccaac tgtagcagaa ggatttaaaa cathtaataca
1621 accctatgtg ctatatgcac atatacaatg cttagattgt gcatggggag taghtaattt
1681 agcattatta agatataaat gtggaaaaaa tagaataaca gttgcaaaag gacttagcac
1741 attactacat gtaccagata cgtgcatggt aattgaacca cccaaattgc gtagtgggtg
1801 tgcagcacta tattggtaca gaacaggaat gtccaatatt agtgaagtha taggggaaac
1861 gccgaatgg atacaaagac taacaattat acaacatgga gttgatgata gcgtgtttga
1921 cctgtcagaa atgatacaat gggcgtttga taatgacct acagatghaa gtgatattgc
1981 atatgaatat gcattaatag cagatagtha tagtaacgcc gctgcatttt taaaagcaa
2041 ctgccaggca aaatacctaa agattgtgc agttatgtgt aggcattata aaagagcaca
2101 aaaaagacaa atgagtatgt cacagtggat aaaatggaga tgtgataaaa tagaagaggg
2161 gggagattgg aaacccatag tacaattttt aagatatcaa ggagtagaat ttataacgtt
2221 tttatgtgca ttaaaagatt ttttaaaag taccclaaaa agaaattgca ttgtgctgtg
2281 tgggccagca aatacaggca agtcatactt tggaatgagc ctgctacatt ttttacaagg
2341 aactghaatt tcacatghaa attcaaatag tcaatttttg ctagaacctt taacagatcg
2401 taaatttagct atgctagacg atghaacaga tagttgttgg acatattttg atacatatat
2461 gcghaatgct ttggatggca atcctataag tgtagataga aagcataggc acctagtaca
2521 aattaaatgt ccaccaatgc ttattacatc aaatacaaat ccagttacag ataacaggtg
2581 gccatattta aatagcagat taatggtatt taaatttcca aacaaattgc catttgacaa
2641 aaatagaaat ccagtatata caattaatga cagaaactgg aaatgttttt ttghaaaggac
2701 gtggtgcaga ttagatttga acgaggaaga ggaagatgca gacagtgatg gacacccttt
2761 cgcagcgttt aagtgtgtta caggatcaaa tattagaaca ttatghaaac gatagthaag
2821 acattaatga acacataaac tattghaaac tgggtcgtat ggaaaatgha attttatttg
2881 cagcaagaga gaacaatata catacattaa accaccagg ggtgccaacg ttttgggtg
2941 ctaaaaacaa ggcatgtgha gctattgha tgcagtcaaa ccgtacttcc actghaatgc
3001 cctgtttttt aaaacatttt ttaggtgctg tttgccatag ttcttggcat gtttcttgca
3061 ttgtccattg ctcatthttt aactcagttt gtgccaact ctctaacgcc atctgcagca
3121 agghaaacac aatgcattac acaagctgha catthtatata ttatghaaat gatgtaggac
3181 agtgggtgha aaccacagga aatgtggact tttggggact atattataaa gtghaaagag
3241 aacaggtgha ctatghaaaa tttatacatg atgcaaaaa atatgggact acagacaagt
3301 gghaagtgha ttataatggc aaggthattg attgthtatga ctctatgtgc agtaccagtg
3361 acgagcaagt atccactgct ggatcttctg agcaactatc ataccctcc gcaacgcccc
3421 ccgaagccac gtacttgggc ccccaaacgt ggaaccgtca gacgaagact ghaaagcgac

3481 caagacagtg tggatacaca cagcaccctc agtctaccag cgtgtcagtg gactactgtg
3541 acaacccagt cgtccgtttg catccaggca acaacccgcg acggcacatc ccttgtagta
3601 acactacgcc tataatacac ttaaaagggtg acaaaaatgg ccttaagtgt ttaagggtata
3661 gattaagaaa agtacactgg ttatttgaaa atatttcctc tacctggcat tggacaggaa
3721 acagaggatc agccaaaaca ggcattttta cattaacata tacaagcgaa acacaacgca
3781 atgaattttt agatactgta aaaattccta atagtgtaca aatacatgtt ggggtatatga
3841 gtgtgtaatg gttgttatgc aaatgtaaca caagccaata ctgctgctat attgtatagc
3901 tgaggaaatg ataacccttg tatttggtgt ttgtgtttgt gtttgcttgt gtgtgtgttg
3961 caatgtcccg cttctgcaat ctgtctatat gtgtgcatat acatgggttac tagtatttgt
4021 gtatattgtg gttatcacct cctcatatga gtgtttttta ctatatatat tgttttttat
4081 aattccactg ttactactat atgcccatgc aatactgtcc atacaataat tgctgtatat
4141 tgtaaattac attgcactgt attgtacagt atattttaaa cacattatta tttttgtag
4201 gtgttggttt tgttacattt ataataaaac atgggtttccc atcgtgctgc tcgtcgtaaa
4261 cgtgcctcag caacagactt atataaaaact tgcaagcagg caggtagatg cccttctgat
4321 gttattaata aagttgaagg tacaacttta gctgataaaa tattgcagtg gaccagccta
4381 ggaatatttt taggtggact aggtattggt actggatctg gtaccgggtg cagaacaggg
4441 tacatacctt taggggggag tacaacact atagtagatg tatcgctgc taaaccacca
4501 gtagttattg aacctgttg acctacagat ccatctatag ttacattagt tgaggattct
4561 agtgttataa catctggagc ccctgcccc acaatttacag gtacttcagg atttgaaata
4621 tctacctcta gtacaacaac accagctggt ttggatataa cccaacctc ttctgttcaa
4681 attagtagct ctagttttat aaatcctgca ttacagacc cttctgtcat tgaggttccc
4741 caaacaggtg aaatttctgg taatatatta attagtacc ctacctctg tgcacatggc
4801 tatgaagaaa ttccaatgca aacgtttgct acggaaggta ctggtttgga acccattagc
4861 agtaccacca atccaacagt acgtcgtgtg gctggaccta gattgtacag tagggcta
4921 caacaagttc ggggtgtctaa cgctgacttt ttaacacgtc catccacatt tgttacatat
4981 gataaccctg cttatgatcc aattgatact acattaactt ttgaccctc atcagagggt
5041 ccagaccgag actttatgga tatagttcgt ttgcataggc ctgcattaac atccagacgc
5101 agcactgtaa ggttttagtag gctaggacaa cgggcaacca tgtttaccg tagtggtaaa
5161 caaattgggg ccggtgtaca tttttatcat gatataagcc ctataccaca tgctgaagat
5221 attgaattgc aacctcttgt ttcttcccag gctgctactg atgatataa tgatatatat
5281 gcagatatta cagatgaagc acctactagt actgccaaca ctgcatttac aattcctaaa
5341 tcttcttttc aaagtttgtc attaacacgg tcggcatcta gcacctttc aaatgtaact
5401 gttccttttg ctactgcctg ggatgttctt gtaaatacag gaccgatat agttttacct
5461 aatactaata ttgttgaacc cacttattct actacaccct ttaccacat acagtctatt
5521 aatatagaag gcacaaatta ttttttatgg cctatatatt attttttacc tcgtaaacgt
5581 aaacgtgttc cctatttttt tacagatggc tctatggcgt tctagtgaca acaagggtga
5641 tctacctcca ccttcggtag ctaagggtgt cagcactgat gagtatgtca cccgtaccag
5701 tattttctac cagcaggca gttccagact tcttacagtt ggacatccat attttaaagt
5761 acctaaaggt ggtaatggta gacaggatgt tctaagggtg tctgcatac aatacagagt
5821 atttaggggt aagttacctg atcccaataa atttggcctt ccagataaca cagtatatga
5881 tctaactct caacgcttg tctgggctg tgtaggtgtt gaaatcggtc ggggccaacc
5941 tttaggggta ggactcagtg gtcattccatt atataataa ttggatgaca ctgaaaactc
6001 tcatgtagca tctgctgttg ataccaaaga tacacgtgat aatgtatctg tggattataa
6061 acaaaactcag ctgtgtatta ttggctgtgt acctgccatt ggagaacact ggacaaaggg

6121 cactgcttgt aagcctacta ctgtgggttca gggcgattgt cctccactag aattaataaa
 6181 tacaccaatt gaagatgggtg atatggtaga cacaggatat ggggctatgg acttttaaatt
 6241 gttgcaggat aacaaaagtg aagtaccatt ggatatttgt cagtctattt gtaaatatcc
 6301 tgattattta caaatgtcag cagatgctta tggagacagt atgttttttt gtttaaggcg
 6361 agaacaggtt tttgccagac atttttggaa tagatctggt actatgggtg atcaacttcc
 6421 tgaatcacta tatattaaag gtactgacat acgtgccaac ccaggcagtt atttatatcc
 6481 cccttcccca agtgggtctg tggttacttc tgattcacia ttatttaata aaccatattg
 6541 gctgcacaag gctcagggtt taaacaatgg tatatgttgg cacaatcaat tgtttttaac
 6601 agttgttagat actactcgca gcaccaatct ttctgtgtgt gtttctacta cttcttctat
 6661 tcctaattga tacacaccta ccagttttta agaatatgcc agacatgtgg aggaatttga
 6721 tttgcagttt atatttcaac tgtgtaaaat aacattaact acagaggtaa tgtcatacat
 6781 tcataatatg aataccacta ttttggagga ttggaatttt ggtgttacac cacctcctac
 6841 tgctagttta gttgacacat accgttttgt tcaatctgct gctgtaactt gtcaaaagga
 6901 caccgcaccg ccagtttaaac aggaccctta tgacaaacta aagttttggc ctgtagatct
 6961 taaggaaagg ttttctgcag atcttgatca gtttcctttg ggacgtaaat ttttattgca
 7021 attaggagct agacctaagc ccaactatag cccacgcaa cgtgcagcgc ctgcccctac
 7081 ctctacccca tcacaaaaac gtgttaagcg tcgcaagtct tccagaaaaat agtggtgttt
 7141 gttatgtgtt tgtatgtgtg catgttgtat gttttgtatt gtttgctgt ttgtatgttg
 7201 tgtatatgta catgtttgtt tgtctgctgt atgtgtgtat ttgtttttgt acataataaa
 7261 gtatgcatga cagtttcatg tgtggttgca ccaatgagt aaggtagtct ccctttattg
 7321 tttctttgtc cttattacac attattacac attgccctac ttacataggt gtgtttgttc
 7381 cttcattttg tcctgaatgt ccagttttgc atttgacat tatatggcgt ccattttatc
 7441 ctttaaactc tccattttgc tgtgcaaccg ttttcggtta ccttggttta accttacctt
 7501 tttgaacaat taatctgttt aaacatcagc aaaacagtta atccccatct tgtttcctcc
 7561 tacacgccta gactactaac acaacttaca aacgcaaact agttagtcat catcctgtcc
 7621 aggtgcactc taacaatact tgcataactt tgggtggcgcc cttgttaata aaacagcttt
 7681 taggcacata ttttactgt ttttactact ttaattgcat aattggcttg caaaactact
 7741 gtgcaatcca agaattgtgc tataatttat tgtaaaaaac atgactaagg tttttgtcat
 7801 tgtaagcaa ccgaaaaagg tcgggcaagt acatgcacac tttctactta ttacttttta
 7861 caatcatagt aataaaaaag ggtgtaaccg aaaacg

//