

Human papillomavirus type 35 complete genome

GenBank: M74117.1

[FASTA Graphics](#)

[Go to:](#)

LOCUS PPH35CG 7851 bp DNA circular VRL 10-MAY-2002
DEFINITION Human papillomavirus type 35 complete genome.
ACCESSION M74117
VERSION M74117.1
KEYWORDS complete genome; major capsid protein; minor capsid protein;
regulatory protein; replication protein; transformer protein.
SOURCE human papillomavirus 35
ORGANISM [human papillomavirus 35](#)
Viruses; Monodnaviria; Shotokuvirae; Cossaviricota;
Papovaviricetes; Zurhausenvirales; Papillomaviridae;
Firstpapillomavirinae; Alphapapillomavirus.
REFERENCE 1 (sites)
AUTHORS Lorincz,A.T., Quinn,A.P., Lancaster,W.D. and Temple,G.F.
TITLE A New Type of Papillomavirus Associated with Cancer of the Uterine
Cervix
JOURNAL Virology 159, 187-190 (1991)
MEDLINE [87265470](#)
REFERENCE 2 (bases 1 to 7851)
AUTHORS Marich,J.E., Pontsler,A.V., Rice,S.M., McGraw,K.A. and
Dubensky,T.W.
TITLE The phylogenetic relationship and complete nucleotide sequence of
human papillomavirus type 35
JOURNAL Virology 186 (2), 770-776 (1992)
PUBMED [1310198](#)
COMMENT Original source text: Human papillomavirus type 35 cervical
carcinoma DNA.
FEATURES Location/Qualifiers
source 1..7851
/organism="human papillomavirus 35"
/proviral
/mol_type="genomic DNA"
/isolation_source="cervical carcinoma"
/db_xref="taxon:[10587](#)"
[5'UTR](#) join(7092..7851,1..109)
/standard_name="LCR"
/function="regulatory region"
[protein bind](#) 17..22
/bound_moiety="Sp-1"
[regulatory](#) complement(18..26)
/regulatory_class="CAAT_signal"

protein bind 24..35
 /note="putative"
 /bound_moiety="E2"
 /function="gene transcription"

protein bind 39..50
 /note="putative"
 /bound_moiety="E2"
 /function="gene transcription"

regulatory 54..59
 /regulatory_class="TATA_box"
 /note="putative"

gene 110..559
 /gene="E6"

CDS 110..559
 /gene="E6"
 /note="putative; E6 ORF from bp 59 to 559"
 /codon_start=1
 /product="transforming protein"
 /protein_id="[AAA46966.1](#)"
 /translation="MFQDPAERPYPYKLDLCNEVEESIHEICLNCVYCKQELQRSEVYD
 FACYDLCIVYREGQPYGVCMKCLKFYYSKISEYRWYRYSVYGETLEKQCNKQLCHLLIR
 CITCQKPLCPVEKQRHLEEKRFHNIIGRWTGRCMSCWKPTRRETEV"

misc feature 230..238
 /gene="E6"
 /standard_name="Splice donor"

misc feature 405..416
 /gene="E6"
 /standard_name="Splice acceptor"

gene 562..861
 /gene="E7"

CDS 562..861
 /gene="E7"
 /note="putative"
 /codon_start=1
 /product="transforming protein"
 /protein_id="[AAA46967.1](#)"
 /translation="MHGEITTLQDYVLDLEPEATDLYCYEQLCDSSEEEEDTIDGPAG
 QAKPDTSNYNIVTSCCKCEATLRLCVQSTHIDIRKLEDLLMGTFGIVCPGCSQRA"

gene 868..2760
 /gene="E1"

CDS 868..2760
 /gene="E1"
 /note="putative"
 /codon_start=1

```

/product="replication protein"
/protein_id="AAA46968.1"
/translation="MADPAGTDEGEGTGCNGWFFVEAVVSRRTGSSVEDENEDDCDRG
EDMVDFINDTDILNIQAETETAQALFHAQEEQTHKEAVQVLKRKYASSPLSSVSLCVN
NNISPRLKAICIKNTAAKRRLFELPDSGYGNSEVEIHEIQQVEGHDTVEQCMSGSG
DSITSSSDERHDETPTRDIIQILKCSNANAAMLAKFKELFGISFTELIRPFKSDKSTC
TDWCVAAFGIAPSVANFKHITYVYIYNVYRVHGAMVILALLRFKVEKREQQKLTIDAK
LLCISAASMLIQPPKLRSTPAALYWFKTAMSNI SEVDGETPEWIQRQTVLQHSFNDAI
FDLSEMVQWAYDNDFIDDSDIAYKYAQLAETNSNACAFKSNQAKIVKDCATMCRHY
KRAEKREMTMSQWIKRRCQVDDDGWRDIVRFLRYQQVDFVAFLSALKNFLHGVKPK
NCILYIYAPNTGKSLFGMSLMHFLQGAIISYVNSKSHFWLQPLYDAKIAMLDDATSPC
GIYRPIFKKCTRWSYISFRCKALSIVHIMPTFTYYININAGKDDRWPYLHSRVVVF
FHNEFPFDKNGNPEYGLNDKNWKSFFSRTWCRLNLHEEEVKENDGDAFPFKCVSGQN
TRTLRD"
gene      2693..3796
          /gene="E2"
CDS      2693..3796
          /gene="E2"
          /function="regulation of gene expression"
          /note="putative"
          /codon_start=1
          /product="regulatory protein"
          /protein_id="AAA46969.1"
          /translation="MMETLSQRLSVCQDKILEHYETDSTCLSDHIQYWKLRLECAV
YKAREMGIKTLNHQVVPQAI SKAKAMQAI ELQLMLETNTTEYSTEDWTLQETSIEL
YTTVPTRCLKKDVYTVEAQFDGDKQNTMHYTNWTHIYILEDSICTVVKGLVNYKGIYY
VHQGVETYYVTFREEAKKYGKKNIVEVHVGGQVIVCPESVFSSTELSTAEIATQLHAY
NTTETHTKACSVGTTETQKTNHKRLRGGTELPYNPTKRVRLSAVDSVDRGVYSTSDCT
NKDRCGSCSTTTPIVHLKGDANTLKCSRYRLGKYKALYQDASSTWRWTCTNDKKQIAI
VTLTYTTEYQRDKFLTTVKIPNTVTVSKGYMSI"
gene      3273..3563
          /gene="E4"
CDS      3273..3563
          /gene="E4"
          /note="putative"
          /codon_start=1
          /product="unknown"
          /protein_id="AAA46965.2"
          /translation="MFVLNLYLAAQNYPLLKLLHSYTPPTPPRPIPKPAPWAPQKPRR
QITNDFEGVPSSPTTTPSECDSPVWTVLTEGSTLLHLTAQTKTGVVVVVQLHL"
gene      3793..4038
          /gene="E5"
CDS      3793..4038
          /gene="E5"

```

```

/note="putative"
/codon_start=1
/product="E5"
/protein_id="AAA46970.1"
/translation="MIDLTA SSTVLLCFLLCFCVLLCLCLLVRLLLLSVSLYSALILL
VLILWVTVATPLLAFVWSCFCIYLWMINAHAQYLAVQ"
regulatory      4159..4164
                 /regulatory_class="polyA_signal_sequence"
                 /note="putative"
gene            4184..5593
                 /gene="L2"
CDS             4184..5593
                 /gene="L2"
                 /note="putative; putative"
                 /codon_start=1
                 /product="minor capsid protein"
                 /protein_id="AAA46971.1"
                 /translation="MRHKRSTKRVKRASATQLYRTCKAAGTCPPDVI PKVEGNTVADQ
ILKYGSMAVFFGGLGIGSGSGTGGRSGYVPLGTTPTAATNIPIRPPVTVESIPLDTI
GPLDSSIVSLVEETSFIESGAPVVTPRVPPTTGFTITTSSTDTTPAILDVTISISTHDNP
TFTDPSVLHPPTPAETSGHFVLSSSSISTHNYEEI PMDTFIVSTDSNNITNSTPIPGS
RPTTRLGLYSKGTQQVKVVDPAFMTSPAKLITYDNPAYEGLNPD TTLQFEHEDISLAP
DPDFMDI IALHRPALTSRKGTIRYSRVGNKRTMHTRS GKAI GARVHYQDLSSITEDI
ELQPLQHVPSSLPHTTVSTSLNDGMFDIYAPIDTEEDI IFSASSNNTLYTTSNTAYVP
SNTTIFLSSGYDIPITAGPDIVFNSNTITNSVLPVPTGPIYSI IADGGDFY LHPSYYL
LKRRRKAIPYFFADVSVAV"
gene            5574..7091
                 /gene="L1"
CDS             5574..7091
                 /gene="L1"
                 /note="putative"
                 /codon_start=1
                 /product="major capsid protein"
                 /protein_id="AAA46972.1"
                 /translation="MSLWRSNEATVYLPPVSVSKVVSTDEYVTRTNI YYHAGSSRLLA
VGHPY YAIKKQDSNKI AVPKV SGLQYRVFRVKLPDPNKFGFPDTSFYDPCLQRLVWAC
TGVEVGRGQPLGVGISGHP LLNKLD D TENLNKYVGN SGN SGT DNREC ISMDYKQTQLC
LIGCRPPIGEHWGKGT PCNANQVKAGECP PLELLNTVLQDGMVDTGFGAMDFTTLQA
NKSDVPLDICSSICKYPDY LKMVSEPYGDMLFFYLRR EQMFVRHLFN RAGTVGETVPA
DLYIKGTTGTL PSTSYFPTPSGSMVTS DAQIFNKPYWLQRAQGHNNICWSNQLFVTV
VDTTRSTNMSVCSAVSSDSTYKNDNFKEYLRHGEEYDLQFIFQLCKITL TADVMTYI
HSMNPSILEDWNFGLTPPPSGTLED TYRYVTSQAVTCQKPSAPKPKDDPLKNYTFWEV
DLKEKFSADLDQFPLGRKFL LQAGLKARPNFRLGRRAAPASTSKKSS TKRRKVK S"
repeat region  7090..7105

```

repeat region 7123..7160
protein bind 7415..7426
 /note="putative"
 /bound_moiety="E2"
 /function="gene transcription"
protein bind 7477..7491
 /standard_name="glucocorticoid responsive element"
 /bound_moiety="hormone receptor"
protein bind 7514..7519
 /bound_moiety="NF-1"
protein bind 7527..7532
 /bound_moiety="NF-1"
protein bind 7534..7539
 /bound_moiety="NF-1"
regulatory complement (7670..7677)
 /regulatory_class="enhancer"
 /standard_name="keratinocyte specific enhancer
 (CK-octomer) "
 /note="putative"
protein bind 7671..7676
 /bound_moiety="NF-1"
protein bind 7695..7700
 /bound_moiety="NF-1"

ORIGIN

```

1 ccctataaaa aaaacagggg gtgaccgaaa acggtcgtac cgaaaacggt tgccataaaa
61 gcagaagtgc acaaaaaagc agaagtggac agacattgta aggtgcggtg tgtttcagga
121 cccagctgaa cgaccttaca aactgcatga tttgtgcaac gaggtagaag aaagcatcca
181 tgaaatttgt ttgaattgtg tatactgcaa acaagaatta cagcggagtg aggtatatga
241 ctttgcattg tatgatttgt gtatagtata tagagaaggc cagccatatg gagtatgcat
301 gaaatgttta aaattttatt caaaaataag tgaatataga tggatatagat atagtgtgta
361 tggagaaaac ttagaaaaac aatgcaacaa acagttatgt catttattaa ttaggtgtat
421 tacatgtcaa aaaccgctgt gtccagttga aaagcaaaga catttagaag aaaaaaacg
481 attccataac atcgggtggc ggtggacagg tcggtgtatg tcctgttga aaccaacacg
541 tagagaaacc gaggtgtaat catgcatgga gaaataacta cattgcaaga ctatgtttta
601 gatttggaac ccgaggcaac tgacctatac tgttatgagc aattgtgtga cagctcagag
661 gaggaggaag atactattga cggcagct ggacaagcaa aaccagacac ctccaattat
721 aatattgtaa cgtcctgttg taaatgtgag gcgacactac gtctgtgtgt acagagcaca
781 cacattgaca tacgtaaatt ggaagattta ttaatggca catttggaa agtgtgcccc
841 ggctgttcac agagagcata atctacaatg gctgatcctg caggtacaga tgaaggggag
901 gggacgggat gtaatggatg gttttttgta gaagcagtag ttagtagacg tacgggatcc
961 agtgtagagg acgaaaatga agatgactgt gacagggggg aggatatggt ggactttata
1021 aatgatacag atatattaaa catacaggca gaaacagaga cagcacaagc attatttcat
1081 gcacaggagg agcaaacaca caaagaggct gtacaggtcc taaaacgaaa gtatgctagt
1141 agtccactta gcagcgtgag cttatgtgtt aataataaca taagtccacg tttaaaagct
  
```

1201 atttgcattg aaaataaaaa tacagcagca aagcgacgat tatttgaact accagacagc
1261 ggttatggca attctgaagt ggaaatacac gagatacaac aggtagaggg gcatgataca
1321 gttgaacaat gtagtatggg cagtggggat agtataacct ctagtagcga tgaaagacat
1381 gatgagactc caacgcgaga cataatacaa atactaaaat gtagtaatgc aaacgcagct
1441 atgttggcta aatttaaaga actatttggt attagtttta cagaacttat tagaccattt
1501 aagagtgata aatccacatg tacagattgg tgtgtggccg catttgaat agccccaagt
1561 gtggcgaact ttaacatat aacatatgta tacatataca atgtttatcg tgttcattgg
1621 gctatggtaa ttctagcatt attacgattt aaagtcgaaa aacgagaaca acaattgaaa
1681 actattgatg ctaaattgct atgtatttca gctgcaagta tgctaataca accaccaaaa
1741 ttacgtagta cccagctgc gttatattgg tttaaaacag caatgtcaaa tattagttag
1801 gttgatggag aaacaccaga atggattcaa agacaaacag tattacagca tagttttaat
1861 gatgcaatat ttgacctatc tgaaatggta caatgggcat atgacaatga ttttatagat
1921 gatagtgata tagcatataa atatgcacaa ttggcagaaa ctaatagtaa tgcattgtct
1981 tttttaaaaa gtaattcgca agctaaaatt gtaaaagatt gtgcaacaat gtgtagacat
2041 tataaacgag ctgaaaaaag agaaatgaca atgtcacagt ggattaaaag gcgatgtgca
2101 cagggtggacg atgacggtga ctggagggac atagtacgat ttttaagata tcaacaagta
2161 gatgttggc catttttctc tgcactaaaa aattttttac atgggtgtgc taaaaaaaaat
2221 tgcatactaa tatatggagc accaaacaca ggtaaatcat tatttgaat gaggctaatg
2281 catttcttac aaggagctat tatatcctat gtaaattcta aaagccattt ttggttgcag
2341 ccattatatg atgcaaaaat agctatgtta gatgatgcta catcgccatg tggcatatat
2401 agaccaatat ttaagaaatg cactagatgg aaatcctata tttcatttag atgtaaagca
2461 ttaagcatag tgcataataa gccaccttt acttattaca tcaatataaa tgcaggcaaa
2521 gatgacaggt ggccatactt acatagcagg gtagtggctt ttacatttca caatgaattc
2581 ccatTTgata aaaatggaaa cccagagtat gggcttaatg ataaaaactg gaaatccttt
2641 ttctcaagga cgtgggtgag attaaatttg cacgaggaag aggtcaaaga aaatgatgga
2701 gacgctttcc cagcgtttta gtgtgtgtca ggacaaaata ctagaacatt acgagactga
2761 tagcacatgt ttgtctgac acatacagta ttggaaactg attcgtcttg aatgtgcagt
2821 attttataaa gcaagagaaa tgggaattaa aactcttaac caccaagtgg ttccaacgca
2881 ggccatttca aaagccaaag caatgcaagc aattgaaactg caattaatgt tagagacatt
2941 aaatacaact gagtatagca cagaggactg gacactgcaa gaaacaagta ttgaaactata
3001 tacaacagtt cctacaagat gtttaaaaaa agatgtttat actgtggaag cacaatttga
3061 tggtgataaa caaaatacta tgcattatac taattggaca catatatata tattagagga
3121 cagtatatgt actgtttaa aggactggt aaattataaa ggtatttatt atgtgcatca
3181 ggggtgtaga acatattatg ttacttttag ggaagaggct aaaaagtatg gaaaaaaaaa
3241 tatatgggaa gtgcatgtgg gtggtcaggt aattgtttgt cctgaatctg tatttagcag
3301 cacagaacta tccactgctg aaattgctac acagctacac gcctacaaca ccaccgagac
3361 ccataccaaa gctgctccg tgggcaccac agaaaccag aagacaaatc acaaacgact
3421 tcgagggggg accgagctcc cctacaacc caccaagcga gtgcgactca gtgccgtgga
3481 cagtgttgac agaggggtct actctacatc tgactgcaca aacaaagacc ggtgtggtag
3541 ttgtagtaca actacaccta tagtacattt aaaaggtgat gcaatacat taaagtgttc
3601 aagatataga ttgggtaaat ataaagcatt gtatcaagat gttcatcta catggagatg
3661 gacatgtaca aacgataaaa aacaaatagc aattgtaaca ttaacttaca caacagaata
3721 tcaaagggat aaatttttaa ctacagtaaa aatacctaac acagttacag tgtctaaagg
3781 atatatgtct atatgataga ccttacagct tccagtactg tgttgctgtg ctttttgttg

3841 tgcttttgtg tgcttttgtg cttgtgtctg cttgtacgtt cgctattgct atctgtgtca
3901 ttatactcag cattaatatt actgggttta atactgtggg ttactgtagc aacaccacta
3961 cttgcttttg ttgtttcttg cttttgtata tacctatgga tgattaacgc tcatgcacaa
4021 tatttggcag tacagtaatt gtatacaaac attgtgtttg gtactgtgta acatgtgtgt
4081 atgggtggtt tattttttgt tgttcattgt atattttgtt tttttactgt ttttaacat
4141 ttttatttct gtgtttttaa taaattgatc acatgggtata accatgacgc acaaaaggtc
4201 taaaaaacgt gttaaacgtg catctgcaac acaactatat cgtacttgca aagctgcagg
4261 aacttgtcca ccagatgtta tacctaaggt tgagggtaat actggtgctg atcaaatttt
4321 aaaatatggc agcatggctg tgttttttgg ggggttagga attggttctg gatctggcac
4381 aggtggaaga tctggatag ttccactggg tacaacacct ccaacggctg ccacaaacat
4441 tcctatacga cccctgtaa ctgtggaaag tataaccatta gacacaattg gccctttaga
4501 ttcttctata gtgtcattag tagaggaaac tagttttatt gagtctgggt cccctgttgt
4561 tacaccaagg gtcccaccta caacaggttt tacaataacc acatctacag ataccacacc
4621 tgctatttta gatgtgacat ccataagtac acatgataat cctactttca ctgatccttc
4681 tgttttacac ccaccacgc ctgcagaaac ttcagggtcat tttgtacttt catcatcttc
4741 tattagtaca cataattatg aagaaatccc tatggatact tttattgttt ccacagacag
4801 caataatata actaatagca cgccatttcc agggctctgc cctacgacac gcctaggatt
4861 atatagtaaa ggtaccacgc aggttaaggt tgttgaccct gcctttatga cttctcctgc
4921 aaaacttatt acatatgata atcctgcata tgaaggcctt aaccctgata caaccttaca
4981 atttgagcat gaggatatta gcttagctcc ggatcctgac tttatggaca ttatagcttt
5041 acataggcct gcactaacat ctaggaaagg cactattaga tatagtagag taggtaataa
5101 acgtactatg catacacgaa gtggaaaagc tataggggca cgggtacatt attatcagga
5161 tttaagtagt attactgaag atatagaatt acaaccctta caacatgtac catcctcttt
5221 accacatacc actgtttcaa catcattaaa tgatggatg tttgatattt atgctcctat
5281 agatactgag gaagatatta tattttcagc atcttctaac aatactttat atactacatc
5341 taacactgca tatgttccta gcaatactac tataccatta agtagtggct atgatattcc
5401 tataacagca gggccagaca ttgtatttaa ctctaatact attactaact ctgtactacc
5461 ggtaccacaca ggtcctatat attctattat tgcagatggg ggtgactttt atttacacc
5521 tagttattat ttattaaaac gacgtcgtaa agctatccca tatttttttg cagatgtctc
5581 tgtggcggtc taacgaagcc actgtctacc tgccctccagt gtcagtgtct aagggttgta
5641 gcaactgatga atatgtaaca cgcacaaaaca tctactatca tgcaggcagt tctaggctat
5701 tagctgtggg tcaaccatac tatgtctatta aaaaacaaga ttctaataaa atagcagtac
5761 ccaaggtatc tggtttgcaa tacagagtat ttagagtaaa attaccagat cctaataagt
5821 ttggattttc agacacatca ttttatgatc cctgcctcca gcgtttggt tgggcctgta
5881 caggagttga agtaggtcgt ggtcagccat taggagtagg tattagtggc catcctttat
5941 taaataaatt ggatgatact gaaaatctta ataaatagt tggtaactct ggtaactctg
6001 gtacagataa caggaatgc atttctatgg attataaaca aacacaattg tgtttaatag
6061 gttgtaggcc tcctataggt gaacattggg gaaaaggcac accttgtaat gctaaccagg
6121 taaaagcagg agaatgtcct cctttggagt tactaaacac tgtactacaa gacggggaca
6181 tggtagacac aggatttggg gcaatggatt ttactacatt acaagctaat aaaagtgatg
6241 ttcccctaga tatatgcagt tccatttgca aatatacctga ttatctaaaa atggtttctg
6301 agccatatgg agatatgtta tttttttatt tacgtaggga gcaaatgttt gttagacatt
6361 tatttaatag ggctggaact gtaggtgaaa cagtacctgc agacctatat attaagggta
6421 ccaactggcac attgcctagt actagttatt ttcctactcc tagtggctct atggtaacct

6481 ccgatgcaca aatatttaaat aaacccatatt gggtgcaacg tgcacaaggc cataataatg
6541 gtattttgttg gagtaaccaa ttgtttgtta ctgtagttga tacaaccctg agtacaataa
6601 tgtctgtgtg ttctgctgtg tcttctagtg acagtacata taaaaatgac aattttaag
6661 aatatttaag gcatggtgaa gaatatgatt tacagtttat ttttcagtta tgtaaaataa
6721 cactaacagc agatgttatg acatatattc atagtatgaa cccgtccatt ttagaggatt
6781 ggaatttttg ccttacacca ccgccttctg gtaccttaga ggacacatat cgctatgtaa
6841 catcacaggc tgtaacttgt caaaaacca gtgcaccaa acctaaagat gatccattaa
6901 aaaattatac tttttgggag gttgatttaa aggaaaagt ttctgcagac ttagatcagt
6961 ttccgttggg ccgtaaattt ttgttacaag caggactaaa ggccaggcct aattttagat
7021 taggcaggcg tgcagctcca gcatctacat ctaaaaaatc ttctactaaa cgtagaaaag
7081 taaaaagtta atgtgtaaat gtgtatgcat gtatactgtg tgttatgtgt tgtagtgtt
7141 gtatatatat tatgtgttgt ggtgcctgtt tgtgtttgtac atggcgtgta aatgtgtgta
7201 taatattgtg caatgtgttg tacgtgggtg tttttgtact tagtgtgtag tagttcagta
7261 gccataaagt gatgtgtgtg tttataatta acactgtatt gttgtatgac tatggtgac
7321 cgatatgagc ttacataatt acatgacagc tatattgtgt atataaataa tctacctcca
7381 ttttgtgtgt tagtgtcctt tacattacct ttcaaccgat ttcggttgct gttggtaagc
7441 tttatatggt ttttcaaaa acattcctac ctcagcagaa cacttaatcc ttgtgttctt
7501 gatatatatt gtttgccaac tttatattgg cttttgcaa tctttaaact tgattcatct
7561 tgcagtatta gtcatttttc atacttggg tocaccaca cttgtaacac ttgtaacagt
7621 gcttttaggc acatattttt tgcatttcta aagggcttta attgcacacc ttggctttac
7681 atattatgtg tgtttgcaa caccacccta cacatcctgc caactttaag ttaaacatg
7741 catgtaaac attactcact gtattacaca ttgttatatg cacacagggtg tgccaaccg
7801 atttggatta cagttttata agcatttctt tttattatag ttagtaacaa t

//