

Human Immunodeficiency Virus Type 1 Reverse Transcriptase (p66 & p51) aminoacid sequence unanimity alignments.

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-----p51 domain-----
-----p66 domain-----
-----finger subdomain-----><-----palm subdomain
1      10      20      30      40      50      60      70      80      90      100
|      |      |      |      |      |      |      |      |      |
HXB2   PISPIETVPV KLKPGMDGPK VKQWPLTEEK IKALVEICTE MEKEGKISKI GPENPYNTPV FAIKKKDSTK WRKLVDFREL NKRTQ  DFWEV  QLGIPHPAGL
MXHIV00086
MXHIV00327 -----L-----I-----S--
MXHIV00395 -----V-----R-----G-----I-----S--
MXHIV00401 -----R-----G-----I-----S--
MXHIV00422 -----I-----I-----S--
2WON_A -----I-----I-----S--

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-----p51 domain-----
-----p66 domain-----
palm subdomain--><-----finger subdomain--><-----palm subdomain--
101     110     120     130     140     150     160     170     180     190     200
|      |      |      |      |      |      |      |      |      |
HXB2   KKKKSVTVLD VGDAYFSVPL DEDFRKYTAF TIPSINNETP GIRYQYNVLP QGWKGSPIAF QSSMTKILEP FRKQNPDIWI YQYMDDLIVG SDLEIGQHRT
MXHIV00086
MXHIV00327 -----KG-----P-----R-----V-----E-----
MXHIV00395 --NR-----K-----T-----E-----
MXHIV00401 -----T-----T-----G-RY-----E
MXHIV00422 -----P-----R-----V-----E-----
2WON_A -----P-----R-----V-----E-----

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-----p51 domain-----
-----p66 domain-----
palm subdomain--><-----thumb subdomain--
201     210     220     230     240     250     260     270     280     290     300
|      |      |      |      |      |      |      |      |      |
HXB2   KIEELRQHLL RWGLTTPDKK HQKEPPFLWM GYELHPDKWT VQPIVLPEKD SWTVNDIQKL VGKLNWASQI YPGIKVRQLC KLLRGTKALT EVIPLTEEAE
MXHIV00086
MXHIV00327 -----FD-----E-----E-----A--Q-K--A--
MXHIV00395 --D--E--FA-----M-----G-----S--K--A--IV--A--
MXHIV00401 -----F-----F-----M-----G-----S--K--A--IV--A--
MXHIV00422 -----F-----F-----M-----G-----S--K--A--IV--A--
2WON_A --D--E--FA-----M-----G-----S--K--A--IV--A--

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-----p51 domain-----
-----p66 domain-----
--thumb subdomain--<<-----connection subdomain--
301     310     320     330     340     350     360     370     380     390     400
|      |      |      |      |      |      |      |      |      |
HXB2   LELAENREIL KEPVHGVVYD PSKDLIAEIQ KQGQGWYTYQ IYQEPFKNLK TGKYARMRGA HTNDVKQLTE AVQKITESI VIWGKTPKFK LPIQKETWET
MXHIV00086
MXHIV00327 -----H-----Y-----I--T-----T--AL-----
MXHIV00395 -----N-----V-----D-----K--T--A-----A-----A
MXHIV00401 -----Q-----S-----D-----K--S-----TA-----X-----A
MXHIV00422 -----Q-----S-----D-----K--S-----TA-----X-----A
2WON_A -----Q-----S-----D-----K--S-----TA-----X-----A

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-----p51 domain----->
-----p66 domain-----
connection subdomain--><-----RNase H (p15)-----
401     410     420     430     440     450     460     470     480     490     500
|      |      |      |      |      |      |      |      |      |
HXB2   WWTEYWQATW IPEWEFVNTP PLVKLWYQLE KEPIVGAETF YVDGAANRET KLGKAGYVTN RGRQKVVTLT DTTNQKTELO AIYLALQDSG LEVNIIVTDSQ
MXHIV00086
MXHIV00327 -----V-----D-----D-----D-----P-----S-----S-----R
MXHIV00395 -----V-----D-----D-----D-----P-----S-----S-----R
MXHIV00401 -----V-----D-----D-----D-----P-----S-----S-----R
MXHIV00422 -----V-----D-----D-----D-----P-----S-----S-----R
2WON_A -----V-----D-----D-----D-----P-----S-----S-----R

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-----p66 domain----->
-----RNase H (p15)----->
501      510      520      530      540      550      560
|        |        |        |        |        |        |
HXB2     YALGIIQAQP DQSESELVNQ IIEQLIKKEK VYLAWVPAHK GIGGNEQVDK LVSAGIRKVL
MXHIV0086 -----L-----K-----M-----I-----
MXHIV00327 -----K-----I-----D-----T-----
MXHIV00395 -----H-----K-D-D--S-----I-----S-----
MXHIV00401
MXHIV00422 -----K-----V-----T-----R-----
2WON_A   -----

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HXB2 corresponds to the reference nucleotide sequence for HIV-1, 2WON_A corresponds to the PDB ID for the crystallographic model unto which the polymorphic residues were mapped to. Alignments produced from partial overlapping clones of viral RNA sequences obtained from human blood samples. Clones, contigs, alignments, annotations and maps produced by Pedro Gerardo Hernández Sánchez, Viral & Human Genomics Laboratory UASLP, México. Unanimity reformatting script written by James Robinson, Anthony Nolan Research Institute, London.

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