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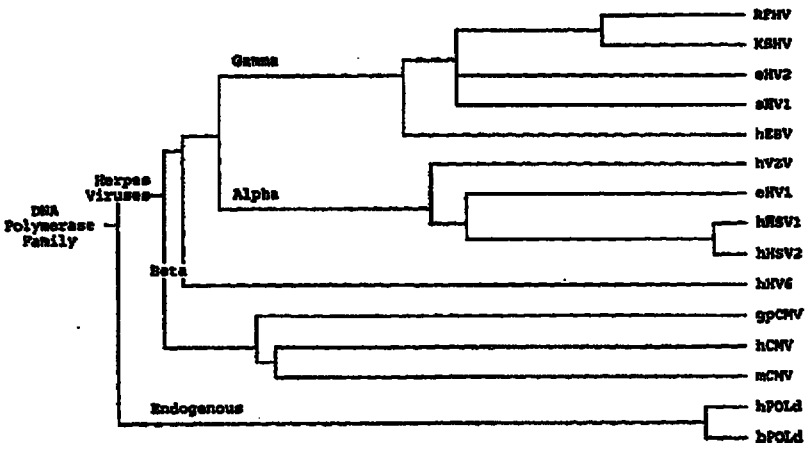
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(54) Title: DNA POLYMERASE OF GAMMA HERPES VIRUSES ASSOCIATED WITH KAPOSI'S SARCOMA AND RETROPERITONEAL FIBROMATOSIS




(57) Abstract

This invention provides isolated polynucleotides encoding DNA polymerases of three members of a subfamily of gamma herpes viruses. Two were obtained from macaque monkeys affected with retroperitoneal fibromatosis, the other from human AIDS patients affected with Kaposi's sarcoma. A 454-base pair fragment encoding a region near the active site of the DNA polymerase is 69-83 % identical amongst the three viruses, but only 54-68 % identical with other known gamma herpes sequences and < 55 % identical with alpha and beta herpes sequences. Also provided are ploynucleotides encoding DNA polymerase from related viruses in the RFHV/KSHV subfamily. Polynucleotides prepared according to the sequence data can be used as reagents to detect and characterize related sequences. Such reagents may be used to detect members of the RFHV/KSHV subfamily, including but not limited to RFHV, RFHV2, and KSHV. Corresponding polypeptides and peptide fragments may be obtained by expressing the polynucleotide or by chemical synthesis. They may be used for detecting specific antibody potentially present in the serum of infected subjects. They may also be used for designing or screening pharmaceutical compounds that limit viral replication by inhibiting DNA polymerase activity.