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Isolation and Phylogeny of HERV-W *pol* Fragments in Human monochromosomes.

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Abstract

A new human endogenous retroviral family (HERV-W) has recently been described that is related to multiple sclerosis-associated retrovirus (MSRV) sequences that have been identified in particles recovered from monocyte cultures from patients with multiple sclerosis. Using the PCR approach with human monochromosomal somatic cell hybrid DNA panel, twenty-four *pol* fragments of HERV-W family from chromosomes 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 20, 21, X, and Y were identified and analyzed. They showed a high degree of nucleotide sequence similarity (89.3~91.3%) with that of the HERV-W. Translation of the *pol* fragments showed no frameshift and termination codon by deletion/insertion or point mutation in some clones, HWP4-1, HWP4-2 from chromosome 4, and HWPX-1 from chromosome X. Phylogenetic analysis from the HERV-W family indicates that the *pol* fragments has evolved independently among chromosomes or represent integration events separately during primate evolution.