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# Identification and Phylogenetic Analysis of SINE-R Retroposon Family in cDNA Library of Human Fetal Brain

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## Abstract

SINE-R retroposons have been derived from human endogenous retrovirus HERV-K family and found to be hominoid specific. Both SINE-R retroposons and HERV-K family are potentially capable of affecting the expression of closely located genes. From cDNA library of the human fetal brain, we identified seven SINE-R retroposons and compared them with sequences derived from the GenBank database. The SINE-R retroposons from human fetal brain showed 85~97% sequence similarities with human-specific retroposon SINE-R.C2. They also showed 88~96% sequence similarities with the sequence of the schizo-cDNA clone that derived from postmortem tissue from the frontal cortex of an individual suffering from schizophrenia. Phylogenetic analysis using the neighbor-joining method revealed that the seven new SINE-R retroposons from cDNA library of the human fetal brain have been proliferated independently during human evolution. The data indicate that such SINE-R retroposons are expressed in human fetal brain and deserve further investigation as potential leads to an understanding of neuropsychiatric diseases