The structure of the regulatory region of the rat L1 (L1Rn, long interspersed repeated) DNA family of transposable elements.

Abstract

Here we report the DNA structure of the left 1.5 kb of two newly isolated full length members of the rat L1 DNA family. The DNA sequence of these elements is similar to that of retroviral long terminal repeats (LTRs). The flanking regions are 320 nucleotides in length and possess several A+T-rich motifs. The 5' flanking region contains four imperfectly matched direct repeats of 13 nucleotides that may be involved in RNA promoter activity. The terminal inverted repeats are 24 nucleotides in length and are imperfectly matched to the adjacent DNA sequence. The 3' flanking regions lack a specific pattern and the terminal inverted repeats are not compatible with the reverse complement of the 5' flanking region. The flanking regions may function as a promoter in rat cells when fused to the Escherichia coli chloramphenicol acyltransferase gene.