The complete sequence of mag, a new retrotransposon in *Bombyx mori*

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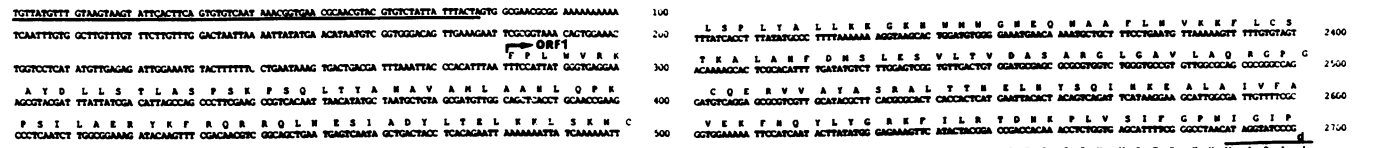
Mag, a 4564bp long transposable element has been discovered in the large intron of a cloned allele of the Ser2 gene (1). A few copies (7 to14) are dispersed into the genome of different strains of *Bombyx mori*. It is flanked by a 5bp repeat of the target sequence and is bordered by direct terminal repeats of 77 nucleotides. Two large open reading frames are organized as the gag and pol genes of retroviruses in the non coding strand of the Ser2 gene. The ORF1 is 258 codons long and presents the characteristic features of two nucleic acid binding motifs (underlined a). The ORF2 (1195 codons) shows strong homologies with the retroviral protease (b), reverse transcriptase (c), Rnase H (d) and endonuclease (e, f), in this order. The unusually short terminal repeat, different from the arrangement of the LTR of retroviruses, has been confirmed by sequencing other copies of this element selected from a Bombyx genomic library. From the phylogenetic tree established on the RT sequence (2 and personal communication), this retrotransposon can be positioned among the copia like family elements of Drosophila.



REFERENCES

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2. Xiong,X. and Eickbush,Th.H. (1988) *Mol. Biol. Evol.* **5**, 675–690.