

Intrinsic Terminators across Prokaryotes Genomes

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Intrinsic terminator contains an RNA structural motif to terminate transcription without involvement of other factors (e.g. rho protein). The characterization of intrinsic terminators may shed light on gene regulation in the prokaryotic cells. Most of current studies on intrinsic terminators focus on the model organism *E. coli*. The intrinsic terminator features are still not clear for most prokaryotes. The availability of complete genomic sequences allows us to perform the intrinsic terminator study across different species. Here we analyzed the intrinsic terminators for about 100 gene homologs, which have experimentally validated intrinsic terminators in *E. coli*, across 240 eubacterial and archaeal genomes using Rnall, the intrinsic terminator prediction algorithm we developed earlier (Wan and Xu, *Journal of Computer Science and Technology*, **20**: 465-482). We found the terminator sequences have changed or have even been lost during evolution. The relationships between terminator evolution and other factors, such as gene evolution and GC content, have also been explored in this study.