

SL808 Identification and Characterization of the Bidirectional Promoter of the Human DDX13 and RD Genes

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The human DDX13 and RD genes were found to be arranged in a head-to-head configuration in the class III MHC complex and their ATG start codons were separated by 745 base pairs. Northern blot analysis revealed that DDX13 and RD exhibit distinct patterns of steady-state expression among multiple human tissues. The common 740 bp intergenic region showed its promoter activity in the DDX13 direction only in transient transfection assays after fusion to the *cat* gene in either direction. However, constructs containing different segments of both genes revealed a region of 262 bp proximal to the DDX13 gene, which showed bidirectional promoter activity in HeLa and HepG2 cells. Because the common 740 bp intergenic region failed to show its promoter activity in the RD direction, it appeared that a negatively acting region for the RD gene was present within the region -267 to -744. Indeed, the 319 bp region (-423 to -744) showed inhibitory effect on reporter gene expression only when it was placed downstream from the promoter in the same polarity as the RD transcription.