Alternative splicing is an important cellular mechanism. It allows to produce multiple protein isoforms from a limited number of genes. Regulation of alternative splicing involves cis-acting elements on pre-mRNA and trans-acting splicing factors (SR and hnRNP proteins). Because splicing occurs co-transcriptionaly, chromatin structure appears to have a role in the regulation of alternative splicing. We have studied the effect of histone acetylation on alternative splicing. We have prepared splicing reporter for alternative EDB exon, which is part of the fibronectin gene. We have shown, that the inhibition of histone deacetylases affects splicing pattern of EDB exon from the reporter in the same way as the splicing of the endogenous EDB exon. Furthermore, we have shown, that the structure of the promoter affects splicing of alternative EDB exon from splicing reporter. Currently we have found out, that the structure of the promoter influences the degree of histone H4 acetylation. Inclusion of alternative EDB exon in mRNA was inversely proportional to histon acetylation on the reporter. This work might explain why various promoters have different splicing patterns of alternative exons.