

P048 SF2/ASF binds the HPV-16 late RNA control element and are regulated during differentiation of virus-infected epithelial cells.

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Pre-mRNA splicing occurs in the spliceosome, composed of small ribonucleoprotein particles (snRNPs) and many non-snRNP components. SR proteins are essential members of this latter class. Recruitment of snRNPs to 5' and 3' splice sites is mediated and promoted by SR proteins. SR proteins also bridge splicing factors across exons to help to define these units and have a central role in alternative and enhancer-dependent splicing. Here, we show that the SR protein SF2/ASF is part of a complex that forms upon the 79 nucleotide negative regulatory RNA element (NRE) that regulates late gene expression in human papillomavirus (HPV) type 16. However the NRE does not contain any active splice sites, is located in the viral late 3' untranslated region and regulates RNA processing events other than splicing. The level of expression and extent of phosphorylation of SF2/ASF is up-regulated with epithelial differentiation, as is its subcellular distribution, specifically in HPV-16-infected epithelial cells. Expression levels of SF2/ASF are controlled, at least in part, by the virus transcription regulator, E2