LACK OF CORRELATION BETWEEN HERV-K EXPRESSION AND CYTOMEGALOVIRUS

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Human endogenous retrovirus (HERV) is comprised of 8% of the human genome most of the element that are found are nonfunctional because they are mutated and/or deleted within the genes. HERV sequences are believed to play a major role in a number of physiological and pathological processes, which warrant further investigation of the function and regulation of HERV in human conditions. The K-type HERV (HERV-K) RNA has been reported to be transactivated by the cytomegalovirus. In this study we used twelve CMV samples and examined the HERV-K RNA expression after careful removal of contaminating cellular DNA using DNase 1. Furthermore, we compared PCR and RT-PCR HERV-K amplicons by gel electrophoresis. We found that using DNase 1 digestion effectively decreased positive signals of HERV-K amplicons. Since all of the CMV positive samples were negative for expressions of HERV-K, our results did not support the activation of HERV-K by CMV as previously reported. However, given the small sample size, further studies are necessary to clarify the regulation. In addition, our study calls for careful removal of cellular DNA to accurately evaluate HERV-K RNA expression.