Abstract: We have previously shown that human immunodeficiency virus type 2 (HIV-2) without functional vpx and vpr genes is severely defective for viral growth in lymphocytic cells, and suggested that the virions produced in the absence of Vpx and Vpr are critically damaged. To examine the nature of replication-defect for the vpx/vpr double mutant, we quantitatively and morphologically studied the virions produced in cells transfected or infected with wild type clone, single (vpx and vpr mutants) or the double mutant. While no significant difference in virion production was found for various virus clones in transfected cells, a major growth retardation in infected cells was readily observed for the vpx and vpx/vpr mutants. In particular, no viral growth was detected for the double mutant. By contrast to the very distinct growth characteristics of the three mutant clones, no appreciable difference in virion morphology was noted. These results indicated that Vpx and Vpr of HIV-2 may cooperatively contribute to virion infectivity without affecting virion morphogenesis. J. Med. Invest. 53 : 271-276, August, 2006

Keywords: HIV-2, accessory proteins, Vpx, Vpr
Cells

Transfection

Infection

Reverse transcriptase (RT) assay

DNA

Electron microscopy (EM)

Characteristics of virions produced in transfected cells

Characteristics of virions produced in infected cells

Conclusion
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Morphology of HIV-2 vpr/vpx mutants

In vitro

Herpesvirus saimiri

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