

CTL Responses to Regulatory Proteins Tat and Rev in HIV-1 B'/'C Virus-Infected Individuals¹

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Objective To characterize HIV-1 specific CTL responses to regulatory proteins Tat and Rev in HIV-B'/'C virus-infected ART-naïve individuals. **Methods** HIV-1-specific CTL responses were analyzed by IFN- γ ELISPOT assay using overlapping peptides spanning the consensus sequences of HIV-1 clade C Tat and Rev proteins. Statistical analysis and graphical presentation were performed using SIGMAPLOT 10.0 and SIGMASTAT 3.5. For samples with a positive response, the magnitude of CTL responses was compared between HIV-1 C proteins by Wilcoxon rank sum test, and the significance threshold was $P < 0.05$. **Results** Tat and Rev were frequently recognized, with 23% and 52% of the tested individuals having detectable responses to these proteins, respectively. Several immunodominant regions were detected in Rev. No significant correlation was observed between the magnitude and breadth of CTL responses to regulatory proteins and the control of virus replication in this study. **Conclusion** Tat and Rev can serve as targets for HIV-1-specific CTL, and several immunodominant regions are detectable in Rev. Further characterization of epitopes and their role in virus control may shed light on pathogenesis of HIV-1 natural infection and also be useful for the design and testing of candidate vaccines.

Key words: HIV-1; Immune responses; ELISPOT; Cytotoxic T-lymphocytes

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