

Abstract:

Abstract OBJECTIVE: To characterize functional properties of HIV-specific IgA in samples representing both systemic and mucosal compartments of HIV-1 highly exposed persistently seronegative (HEPS) individuals. METHODS: IgA was purified from plasma and mucosal samples from HEPS individuals and tested for the ability to neutralize infection of peripheral blood mononuclear cells (PBMC) by a non-syncytium inducing HIV-1 (clade B) primary isolate. None of these individuals had measurable HIV-1-specific IgG. RESULTS: HIV-1-specific neutralizing activity of the purified IgA from plasma (n = 15), saliva (n = 15) and cervicovaginal fluid (CVF) (n = 14) were found in the majority of samples (73, 73 and 79%, respectively). In contrast, plasma, saliva and CVF samples of low-risk, uninfected HIV-seronegative individuals lacked neutralizing IgA, with the exception of two out of 34 (6%) saliva samples. CONCLUSION: Mucosal and plasma IgA from HEPS individuals can neutralize HIV-1 infection.