Analysis of the neutralizing antibody response elicited in rabbits by repeated inoculation with trimeric HIV-1 envelope glycoproteins.
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Abstract
The elicitation of broadly neutralizing antibodies directed against the human immunodeficiency virus type 1 (HIV-1) envelope is a major goal of vaccine development and clinical trials. Several laboratories have described the generation of broadly neutralizing antibodies in nonhuman primates immunized with recombinant proteins. In this study, we demonstrate that rabbits immunized with trimeric HIV-1 envelope glycoproteins have a significant neutralizing antibody response directed against the HIV-1 envelope. We provide evidence that the elicited neutralizing antibodies are specific for the HIV-1 envelope and that they are directed against the conserved V3 loop of gp120. These results suggest that the elicited neutralizing antibodies are derived from B cells that have been activated after encountering HIV-1 infecting cells.