ABSTRACT

The invention provides compositions comprising one or more expression vectors encoding an antigen recognized by CD4+ helper T cells and an antigen recognized by CD8+ cytotoxic T cells (CTL), and in particular, a tumor-specific, tumor-associated, or cell-related antigen. In addition, the compositions preferably comprise an expression vector encoding interferon gamma. Specifically, the antigens recognized by CD4+ helper T cells include, for example, cancer/testis antigens such as NY-ESO-1, and antigens recognized by CD8+ cytotoxic T cell (CTL), in particular, the tumor-specific, tumor-associated, or cell-related antigens include, for example, HER-2/neu and cancer/testis antigens such as NY-ESO-1, MAGE, and SAGE.