ABSTRACT

INFLUENZA VIRUS VACCINE COMPOSITION AND METHODS OF USE

The present invention is directed to enhancing the immune response of a human in need of protection against IV infection by administering *in vivo*, into a tissue of the human, at least one polynucleotide comprising one or more regions of nucleic acid encoding an IV protein or a fragment, a variant, or a derivative thereof. The present invention is further directed to enhancing the immune response of a human in need of protection against IV infection by administering, *in vivo*, into a tissue of the human, at least one IV protein or a fragment, a variant, or derivative thereof. The IV protein can be, for example, in purified form or can be an inactivated IV, such as those present in inactivated IV vaccines. The polynucleotide is incorporated into the cells of the human *in vivo*, and an immunologically effective amount of an immunogenic epitope of an IV, or a fragment, variant, or derivative thereof is produced *in vivo*. The IV protein (in purified form or in the form of an inactivated IV vaccine) is also administered in an immunologically effective amount.

Figure 13