EXPRESSION OF H5N1 VIRUS ANTIGEN HA IN SOYBEAN SEEDS

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TÓM TẮT:

The avian influenza virus H5N1 causes disease in avian of many countries, and has already caused more than $10 billion in losses to poultry farmers. This virus genome consists of eight segments of negative-stranded RNA, which code for 11 proteins. In there, matrix proteins (M), hemagglutinin (HA) and neuraminidase (NA) are important proteins, which are targets for vaccine production. Vaccination is considered as the most important measure to prevent pandemics. Although different types of influenza vaccines including "inactivated" vaccines, vaccines with immunopotentiators, live attenuated vaccines and DNA vaccines have been developed, scientists around the world are developing better vaccines, which are less expensive, easier to store and deliver, safer and more efficacious. Plant produced oral vaccines are particularly attractive because they are economical, easily adaptable to large-scale production, present a minimal risk of contamination with animal or human pathogens, and are stable at room temperature for a long time allowing them to be used in remote areas. This paper, ha1op gene have successful constructed in plant expression vector. Protein HA1 fused a mucosal adjuvant protein LTB and C-myc tag is expressed in high level in Arabidopsis seeds. These results are the base for immunological evaluation and protection of orally administered seed produced antigens. Morever, these resuls will be applied for other antigen of virus.