Influenza viruses are highly infectious and cause local outbreaks annually in many countries. The influenza viruses were characterized with high mutation of the genome and frequent change of antigenicity. Therefore, it is necessary that the composition of influenza vaccines are changed and recommended by WHO annually, depending on the circulating viral strains. The antigenic types of influenza viruses were determined by using the haemagglutination-inhibition (HI) tests with postinfection ferret sera. Ferret is considered as the best animal models for influenza virus. The viral infection symptom of ferret is much similar to human. The postinfection ferret sera are required for identifying serotypes of influenza viruses. For surveillance of influenza viruses in Taiwan, it is important to establish the immunization of influenza viruses to ferret model and generate the postinfection ferret sera. In this study, we used the ferrets as the animal model for influenza viruses, including the breeding and immunization of ferret. We selected the predominant circulating strains of influenza viruses in Taiwan for immunization of ferrets and generated 16 strains including 4 H1N1, 7 H3N2 and 5 influenza B viruses of the postinfection ferret sera. We also used the ferret sera to analyze the antigenicity of major circulating isolates in Taiwan during 2005-2008.