

## عنوان مقاله:

Recombinant monoclonal antibody against GLFGAIAGF epitope of HA<sub>2</sub> protein of Influenza Virus

## محل انتشار:

هفتمین کنگره بین المللی دامپزشکی طیور (سال: 1398)

تعداد صفحات اصل مقاله: 1

## نویسندگان:

Z Lotfi - *Department of Pathobiology, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran*

M Golchin - *Department of Pathobiology, Faculty of Veterinary Medicine, Shahid Bahonar University of Kerman, Kerman, Iran*

## خلاصه مقاله:

**Objectives:** Influenza A viruses (IAVs) pose acute and worldwide spread of respiratory disease. Due to their high variability, IAVs cause repeated epidemics or pandemics. GLFGAIAGF epitope of HA<sub>2</sub> protein of Influenza virus is remarkably conserved across almost all studied subtypes of Influenza A viruses. Recombinant antibodies are a new generation of monoclonal antibodies, which are isolated via phage display technology from immune or non-immune phage libraries against target antigens. These antibodies are used for diagnosis of many different antigens and therapeutics proposes. The object of the present study was to isolate recombinant specific monoclonal antibodies against this conserved epitope of influenza virus for diagnosis all subtypes of Influenza A viruses. **Materials & Methods:** The purified HA<sub>2</sub> (۱-۹)-gVIII phages (hybrid phage) were coated to the immunotubes as antigen and large human semi-synthetic Tomlinson I and J libraries (Center of Protein Engineering, Cambridge, UK) were used to select several phage antibodies against HA<sub>2</sub> epitope. After four rounds of selections, phage antibodies were isolated and screened by polyclonal and monoclonal phage ELISA. One clone with high activity against hybrid phages was chosen for expression of soluble single chain Fv (scFv). The activity of purified scFv for recognition of antigen and H<sub>9</sub>N<sub>2</sub> Influenza A virus was tested by ELISA. **Results & Conclusion:** The anti-HA<sub>2</sub> monoclonal scFv antibodies showed high reactivity with their related peptide and H<sub>9</sub>N<sub>2</sub> Influenza Virus in ELISA assay. The anti-HA<sub>2</sub> monoclonal scFv antibody could be a potential candidate for reorganization of almost all subtypes of Influenza A Virus in diagnostic kits.

## کلمات کلیدی:

Influenza A Virus; HA<sub>2</sub> (۱-۹); monoclonal scFv antibody; Tomlinson I & J libraries

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1202044>

