Abstract

To understand the epidemics of viral infections diseases nationwide , a network of 11 contract laboratories was organized by Center for Disease Control (CDC), Department of Health, Taiwan Republic of China. Specimens were collected from viral infected cases nationwide and sent to each local contract laboratory for the virus isolation and identification. The results were collected and analyzed by CDC for prompt understanding of epidemics and taking suitable control measures. In 2000, a total of 1294 specimens were sent to KMU laboratory for virus isolation and identification. Two hundred and ten strains of virus were isolated, the isolation rate was 16.3%. Of the 210 isolates, 17.6% were adenoviruses, 61.4%were enteroviruses, 9.5% were HSV-1,10%were Influenza A viruses and 14% were Influenza B viruses. All the Influenza A viruses were H1 subtype. In 2002, the epidemic of enterovirus peaked from July to October. The types of enterovirus were CB5, CB2, CB4, Echo6, EV71 and CA24v. The combined results of the contract lab and routine lab showed that Echo6 was the major type in the prior half of the year while CB5 was the major type in the posterior half of the year. In 2002, adenovirus infection peaked in October. The major types were Ad3 and Ad7.

The EV71 VP1 gene was expressed in both E .coli (pET 32a) and mammalian systems. The results of the immunoblot and immunofluorescence antibody test suggested specific binding between in-house immune serum and mAb (E211F, E410G2B, E611G2G) and the VP1 protein expressed in both systems.

The Echo 30 VP1 gene was also expressed in both E. coli (pET 32a) and mammalian systems. Specific binding was also found between immune serum (ATCC) and in-house mAb (15F2, 14B6, 13E4, A2, 15D9, 9D6, 3D9 and 5B3) (Fig.6).

Two fragments of deleted gene were generated and expressed in the same system. The results of immunoblot test showed that mAbs, 15F2, A2, 15D9, 9D6, and 5B3, bind specifically to the C terminal (177 amino acid) while the mAb, 13E4, bind to the N terminal (119 amino acid) of VP1 protein.

mAb, 14Bb and 3D9, did not bind to VP1 protein. This suggested that both mAb might be conformation dependent epitope.