



A real-time RT-PCR assay for rapid detection of coxsackievirus A10

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ABSTRACT. Enterovirus 71 (EV71) and coxsackievirus A16 (CA16) have been the primary causative agents of hand, foot, and mouth disease (HFMD) outbreaks in mainland China in the past. Hence, the surveillance of HFMD has mostly focused on these viruses. However, in recent years, coxsackievirus A10 (CA10) has also been associated with the increasing sporadic HFMD cases and outbreaks. Therefore, a sensitive assay for rapid detection of the CA10 RNA is necessary for disease control. Here, we have developed a specific TaqMan real-time RT-PCR assay by analyzing VP1 gene sequences of CA10 strains from different locations. The assay has been shown to be specific, sensitive, and robust through detection of other related viruses, standard curves, and clinical samples, respectively. This is the first report on development of a VP1 gene-based TaqMan real-time RT-PCR assay for rapid diagnosis of CA10 virus.

Key words: CA10; HFMD; TaqMan real-time RT-PCR; China