# Precise and multiplex H1N1 swine influenza detection using RT-MLPA-CE-SSCP

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In April 2009, H1N1 influenza (swine flu) was identified for the first time and the virus has spread worldwide to become pandemic. The infection with swine influenza can only be confirmed by polymerase chain reaction (PCR) assays. However, other special PCR assays are needed to sub-typing and further characterization.
Here, we developed a new method to discriminate various types of influenza A, including H1N1, using stuffer-free multiplex ligation-dependent probe amplification based on a capillary electrophoresis-single-strand conformation polymorphism. Unlike conventional methods, this approach precisely detects five relevant gene markers permitting confirmation of infection. As a result, all the five genes were respectively identified using synthetic genes and also verified with total RNA of the H1N1 influenza virus. The method had a limit of detection of approximately 32.5 pfu/ml, which is similar to that of the PCR-based technique. These results indicate that the RT-MLPA-CE-SSCP system have considerable potential in clinical diagnosis.