

Video Article

Titration of Human Coronaviruses Using an Immunoperoxidase Assay

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Abstract

Calculation of infectious viral titers represents a basic and essential experimental approach for virologists. Classical plaque assays cannot be used for viruses that do not cause significant cytopathic effects, which is the case for strains 229E and OC43 of human coronavirus (HCoV). An alternative indirect immunoperoxidase assay (IPA) is herein described for the detection and titration of these viruses. Susceptible cells are inoculated with serial logarithmic dilutions of samples in a 96-well plate. After viral growth, viral detection by IPA yields the infectious virus titer, expressed as "Tissue Culture Infectious Dose" (TCID₅₀). This represents the dilution of a virus-containing sample at which half of a series of laboratory wells contain replicating virus. This technique is a reliable method for the titration of HCoV in biological samples (cells, tissues or fluids).

Protocol

The complete text protocol for this experimental approach is available in [Springer Protocols](#).

References