

Creative Diagnostics Introduces Viral Replicon Assay Service to Support Virology Research

Creative Diagnostics recently introduced a series of Viral Replicon Assay services to assist researchers in identifying and studying viruses.

SHIRLEY, NEW YORK, UNITED STATES, April 24, 2023 /EINPresswire.com/ -- As an expert in providing solutions to support virology and microbiology research, [Creative Diagnostics](#) has recently introduced a range of [Viral Replicon Assay](#) services to assist researchers in the identification and study of viruses, including PCR, nucleic acid sequence-based amplification, and Lawrence Livermore Microbial Detection Array.

The isolation of viruses from cultured cells followed by viral nucleic acid detection using immunofluorescence and molecular biology techniques has been successfully utilized for virus identification. Common methods for viral nucleic acid detection by molecular biology techniques include analysis and identification based on polymerase chain reaction (PCR) techniques.

A replicon is a fragment that begins at the origin of DNA replication during DNA replication and ends at the replication fork produced by that origin to complete the process. It contains the regulatory elements necessary for replication. A viral replicon is the nucleic acid material that directs the replication of a virus, i.e., its DNA or RNA. In viral research, the replicon sequence of a specific virus can be amplified and sequenced to determine the type of virus quickly and in a high-throughput manner.

The use of molecular techniques to identify viral genomes directly from clinical samples is one of the great discoveries of the 21st century. Creative Diagnostics possesses the most advanced technologies for viral nucleic acid detection, offering PCR, nucleic acid sequence-based amplification (NASBA), and Lawrence Livermore Microbial Detection Array (LLMDA) to support its clients' viral detection programs. These solutions are undoubtedly the leading technique for the rapid detection and identification of most known human viruses.

PCR can amplify a specific region of DNA sequence 10⁶-fold in vitro, making it an extremely sensitive detection method. In addition, PCR can be applied to identify viral RNA, which is simply reverse-transcribed into DNA and then analyzed by PCR. This is called reverse transcription PCR (RT-PCR). The use of RT-PCR to identify influenza virus has been reported since it was first described by Zhang and Evans in 1991.

RT-PCR detects influenza viruses faster than endpoint assays and with comparable or better sensitivity than cell culture methods. Although the NASBA method is considered highly sensitive, it is not currently widely used because of the difficulty of preparing the NASBA reaction mixture and the high cost of commercial kits. In addition, the LLMDA method employs probes that target different viral genomic DNA to complete virus detection in less than 24 hours. Meanwhile, these oligonucleotide probes can detect new species that are homologous to known microorganisms.

Creative Diagnostics leverages its analytical expertise to provide clients with the most robust portfolio of antiviral and antibacterial in vitro testing services. If you have questions regarding the Viral Replicon Assay Service or other in vitro antiviral testing, please visit Creative Diagnostics at <https://antiviral.creative-diagnostics.com/>.

About Creative Diagnostics

Headquartered in New York, Creative Diagnostics is a consulting and experimental service provider specializing in virology and microbiology. The company provides comprehensive solutions to conquer obstacles in virology and microbiology research, from high-security infrastructure provision, biosafety regulation elucidation, to expert viral system assistance.

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