

Creative Diagnostics Introduces qPCR Assay for Rapid Virus Detection and Quantification

Creative Diagnostics has introduced its new qPCR Assay to the research community.

NEW YORK, UNITED STATES, June 15, 2023 /EINPresswire.com/ -- As an expert in providing solutions to assist virology and microbiology research, [Creative Diagnostics](#) has introduced its new [qPCR Assay](#) to the research community for virus detection and quantification, gene expression analysis, relative/absolute quantification, mutation analysis, and genotyping.

The direct identification of viral genomes in clinical samples by molecular techniques is one of the most important discoveries of the 21st century. Nucleic acid amplification techniques such as PCR, nucleic acid sequence-based amplification (NASBA), and the Lawrence Livermore Microbial Detection Array (LLMDA) are undoubtedly the leading technologies for rapid detection and identification of most known human viruses. PCR is an extremely sensitive assay that can amplify a specific region of DNA sequence 106-fold in vitro.

As one of the most widely used methods, PCR can effectively detect viral RNA by converting the RNA to DNA and then performing a PCR analysis called reverse transcription PCR (RT-PCR). Real-time PCR (or quantitative PCR, qPCR) quantifies the nucleotides of the virus in real time during the reaction. Detection of influenza virus by qPCR is faster than endpoint assays and its sensitivity is comparable to or better than cell culture methods. A previous study of respiratory syncytial virus in nasal secretions from children showed that qPCR was the most sensitive assay compared to immunofluorescence and cell culture-based assays. There are two types of qPCR, one probe-based, called TaqMan PCR, and the other dye-conjugated, called SYBR Green.

qPCR is widely used in experimental studies and clinical diagnosis of HIV-1, dengue virus and influenza virus. For example, the reduction of viral nucleic acids in infected cells is an indicator of the antiviral effect of the test article. In addition, qPCR is a sensitive, precise technique with a wide dynamic range that generates quantitative data. This is a powerful attribute as it allows the quantification of infection, progression of infection and any tissue predisposition in infectious diseases.

Creative Diagnostics now offers qPCR services to assist researchers in a variety of areas including viral detection and quantification, drug/treatment response, gene expression analysis, relative/absolute quantification, mutation analysis, and genotyping. These new qPCR assays are based on the latest technology developed by Creative Diagnostics scientists with extensive

expertise in infection and analysis, and are rigorously tested to ensure accuracy and reliability.

In addition, Creative Diagnostics' team of experts can quantify a variety of viruses, including CMV, DENV, HIV, influenza, RSV, RRV, SFV, SINV, VACV, and ZIKV. These services are tailored to clients' project and include standard sample preparation procedures, primer/probe design and validation using validated viral standards for quantification, and a full professional report.

For more information about Creative Diagnostics and its new line of qPCR assays, please visit <https://antiviral.creative-diagnostics.com/qpcr-assay.html>.

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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