

A single tube multiplex real-time RT-PCR method for simultaneous detection of dengue, chikungunya and Zika viruses

Domain: Diagnostic Assay/Kit

About Technology: This assay incorporates custom-designed primers and probes, along with an actin internal control, to verify RNA integrity and ensure precise amplification. The optimized multiplex format enables rapid and highly sensitive detection of co-circulating arboviruses while minimizing reagent consumption. In-house validation demonstrates strong performance, with 96.1% sensitivity for dengue, 97.2% for chikungunya, and 100% specificity across all three targeted viruses. The assay has also produced concordant results in the QCMD proficiency panel for Zika, confirming its reliability for comprehensive arboviral surveillance

Intended Use: Simultaneous Detection of DENV, CHIKV, and ZIKV in a Single-Tube Multiplex RT-PCR Assay in clinical samples

Advantages:

- Multiplex assay with a stably expressing endogenous internal control in a single reaction

IP Status: Filed (Indian Application no. - 202511095659)

Development Status: In-house validation complete

Institute(s): ICMR-National Institute of Virology (NIV)

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