

# **HIV VIRAL LOAD**

## (QUANTITATIVE) RT PCR Kit

For sensitive and specific quantitative detection for HIV-1 groups M, N, and O; Subtypes A, B, C, D, A/E, F, G, AG-GH, in human plasma or serum Spicemens.



High Quality Reagents for Increased Tolerance, Thermostability and Reproducibility



Turnaround time within 100 minutes



₹

Compatible with all Real-Time PCR Instruments









# HIV VIRAL LOAD (QUANTITATIVE) RT PCR KIT

Human Immunodeficiency Virus (HIV) is a well-known viral agent responsible for causing Acquired Immune Deficiency Syndrome (AIDS). Annually, there are approximately 62.97 thousand new HIV infections and about 41.97 thousand AIDS-related deaths occur in India. Currently, the total number of individuals living with HIV in India is around 2.4 million. Thus, monitoring the viral load in patients with HIV-1 infection is an essential test for the establishment of therapeutic strategy and determination of therapeutic progress. The RT-PCR test is used to quantify the level of HIV RNA in a person's blood. Unlike tests that detect antibodies, this method directly identifies the presence of HIV, making it a valuable tool for researchers and healthcare providers to diagnose infections, especially during the window period.

- HIV, damages vital CD4+ T cells, weakening the immune system
- When the CD4 T-cell number drops significantly, people are diagnosed with AIDS.
- Early detection allows for timely initiation of antiretroviral therapy, which can slow down the progression of HIV to AIDS.



**Intended Use**: The RT PCR kit developed by Trivitron Healthcare Pvt. Ltd. is used for an in vitro nucleic acid amplification kit for the detection & quantification of HIV-1 RNA in Serum / Plasma

#### Sample type: Serum / Plasma

Available Pack size: Rxn: 25rxn, 50rxn, 100rxn.

Target Channels: 5' untranslated region (5' UTR) (FAM) gene and IC (HEX/VIC)

### **Principle of the Test**

The kit includes an RT-PCR enzyme mix designed for RT-PCR technology, utilizing synthetic DNA primers & fluorescence-labeled probes. Detection of HIV RNA in the patient sample triggers the amplification of the 5' untranslated region (5' UTR) gene labeled with FAM through reverse transcription and subsequent Taq-polymerase amplification. Fluorescence-labeled probes undergo cleavage during each PCR cycle, & detection occurs if the fluorescence surpasses the threshold limit in the amplification cycles. Additionally, a Primer-probe set specific to a Bacteriophage gene labeled with HEX/VIC acts as an internal control (IC). A signal in the FAM channel indicates the presence of HIV RNA, while a signal in the HEX/VIC channel confirms proper specimen processing and successful PCR reaction.

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#### **Kit Content**

Tube	Content		
1	Enzyme Mix (EM)		
2	Primer probe Mix (PPM) for HIV detection		
3	HIV QS1, HIV QS2, HIV QS3, HIV QS4		
4	Internal Control (IC)		
5	Nuclease Free Water (NFW)		
6	IFU		



### **Assay Workflow**









Serum/ Plasma Sample

Viral Nucleic acid extraction

Reverse Transcription (RT) & Real - Time PCR amplification

Results

## **Ordering Information**

Product Name	HIV-1 Sure Quantitative RT-PCR kit	HIV-1 Sure Quantitative RT-PCR kit	HIV-1 Sure Quantitative RT-PCR kit	
Cat. No.	DV2-30079	DV2-30080	DV2-30081	
Specification	25rxn/Kit	50rxn/Kit	100rxn/Kit	
Specimen	Serum/Plasma			
Storage	-25° C to -15° C			
Applicable Equipment	QuantStudio-5/3, Bio-Rad CFX96, 384, Applied Biosystems 7300/7500, Roche Diagnostics LightCycler 96/480, Qiagen Rotor-Gene Q			

\*Please note: Product specifications are subject to change without prior notice owing to product modifications, improvements / up-gradation.



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