

Dengue Virus Screening

Real-Time PCR Kit

About **Dengue**

Dengue virus (DENV) is a member of the Flaviviridae family, specifically the Flavivirus genus. It is an RNA virus with a single-stranded positive-sense genome consisting of 10,700 bases.

Each year, DENV infects an estimated 50 to 200 million people worldwide, posing a risk to over 3.6 billion individuals residing in tropical regions and causing approximately 20,000 deaths annually. The spread of dengue can be attributed to various factors, including climate change, rapid urbanization, pressure on water and sanitation, trade, settlement patterns, and viral evolution.

DENV is classified into four distinct serotypes (Dengue 1, 2, 3 & 4) based on differences in their viral structural and nonstructural proteins. Infection with one serotype provides lifelong immunity against that particular serotype. However, subsequent infection with a different serotype can lead to severe dengue hemorrhagic fever due to a phenomenon called antibody-dependent enhancement.

Dengue is a significant global health concern, with Asia representing around 70 percent of the global disease burden, necessitating ongoing efforts in surveillance, prevention, and management strategies to mitigate its impact on affected populations.

Intended **Use**

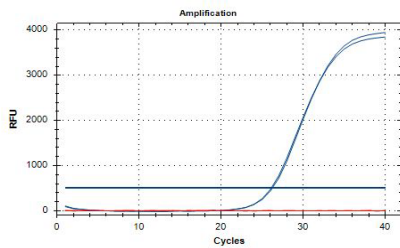
Dengue Virus Screening Real-Time PCR Kit is a multiplex, TaqMan probe-based qualitative assay for the specific screening and detection of Dengue and its subtypes (DENV1, DENV2, DENV3, and DENV4) in human plasma, serum, and whole blood which in turn helps in the initial screening/diagnosis of the Dengue infection. This kit detects Dengue viral target and Human internal control in a single tube with extracted nucleic acids (RNA) as a template.

Key Features

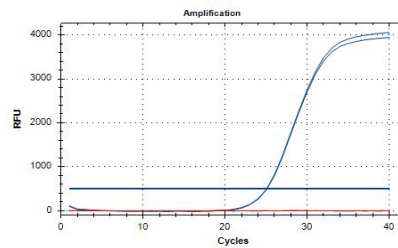
- ✓ Single-Tube, Multiplex, TaqMan Probe-Based Assay
- ✓ RNA extracted from Human Whole blood, plasma, and serum.
- ✓ PCR Run Time is within 65 minutes
- ✓ Open Platform Kit compatible with any Real Time-PCR systems that support FAM, Texas Red/ROX channels.
- ✓ Traceable to BEI Reference Standards - RNA from NR-82, Dengue type 1; RNA from NR-43280 Dengue 2, DENV-2/US/BID-V594/2006; Nucleic Acid from NR-80, Dengue type 3 strain H87; Genomic RNA from NR-80 Dengue type 4, H241 (Tissue-culture adapted).

Targets

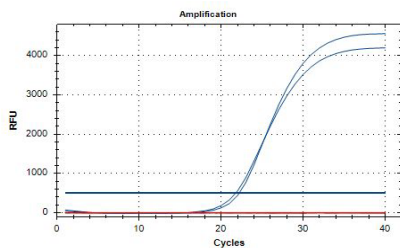
Target	Subtypes	Reporter
Dengue Virus	DENV1, DENV2, DENV3, and DENV4	FAM
Human Internal Control	Beta Actin	TEXAS RED/ROX



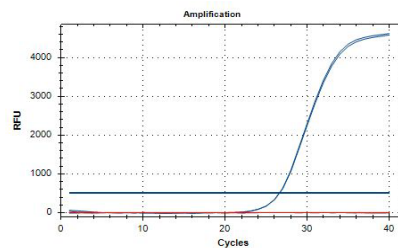
RNA from NR-82, Dengue type 1 **from BEI Resources**



RNA from NR-43280 Dengue 2, DENV-2/US/BID-V594/2006 **from BEI Resources**



Nucleic Acid from NR-80, Dengue type 3 Strain H87 **from BEI Resources**



Genomic RNA from NR-80 Dengue type 4, H241 (Tissue-culture adapted) **from BEI Resources**

Order Information

Cat#	NDVS23017	NDVS23017_01	NDVS23017_02
Pack Size	100 Rxns	50 Rxns	20 Rxns