

# Dengue Fever

## (Serotype 4)

Cat. No. C02-01-1120

One-step real-time reverse transcription PCR for detection of Dengue Fever Virus (serotype 4)

Includes main components for 50 reactions



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Hong Kong DNA Chips Ltd

### 1. KIT COMPONENTS

*PLEASE READ THROUGH THE ENTIRE PROTOCOL BEFORE STARTING.*

The kit contains reagents for a total of 50 reactions:

#### Amplification reagents

- 25 Tubes Reagent Spheres (Store at 4°C)
- 2 x 550µl Dengue 4 Sphere Diluent (Store at -20°C)
- 1 x 25µl Dengue 4 Positive Control (Store at -20°C)

**Note:** The real-time PCR reagent mix **DOES NOT CONTAIN ROX** as passive reference.

#### Storage conditions

Store Reagent Spheres at 4°C with silica gel desiccant. Store Sphere Diluent, Positive Control, and reconstituted sphere at -20°C. Thaw frozen reagents just before use. Mix reagents thoroughly (do not vortex reconstituted sphere containing enzyme).

### 2. PROCEDURE

#### Mastermix Preparation

1. Determine required number of reactions (n).
2. Number of Reagent Spheres required = 0.5 x n.
3. Add 40 µl Sphere Diluent for each Reagent Sphere.
4. Allow Reagent Sphere to reconstitute on ice.
5. Gently tap tubes to mix reagents. Do not vortex enzyme containing reagents

#### Set-up

1. In addition to the RNA obtained from the test samples, each experiment requires a positive and negative (water) control.
2. Set up real-time PCR components according to the table below:

Components	Volume per reaction
Mastermix	20 µl
Sample RNA	5 µl
Total Volume	25 µl

#### Note:

- Use real time PCR tubes and consumable recommended for your real-time PCR equipment.
- Keep RNA samples on ice throughout experiment.
- 5 µl of provided Positive Control can be used to monitor the success of amplification.
- It is advisable to run samples in duplicate to ensure reliability of results.
- Spiking Control: 1 µl of Positive Control can be spiked into test sample to check whether the test sample contains PCR inhibitory substances.

Cycling conditions:

		Data Collection Points (FAM Filter)		
		ABI 7700	ABI 7300/7500	Other Instruments
1 Cycle	42°C 30 Minutes	☐	-	-
	95°C 10 Minutes	☐	-	-
40 Cycles	95°C 15 Seconds	☐	-	-
	58°C 60 Seconds	☐	☐	☐

(Take readings at point ☐)

### 3. DATA ANALYSIS AND INTERPRETATION

Detailed explanations of the basic and advanced operating procedures should be provided with your real-time PCR equipment. This kit is optimized using the Applied Biosystems (ABI) 7700 and 7300 Sequence Detection Systems. Please contact us if you require assistance in setting your ABI 7700 for data analysis without ROX.

#### Spiking control

Negative real-time PCR result may be due to a few scenarios: 1. absence of detected sequence in the sample; 2. presence of detected sequence below limit of detection; 3. presence of PCR inhibitory substances. The purpose of spiking control is to verify whether the test sample contains substances, which may affect PCR reactions. If Ct equals 40 (or similar to Ct given by negative control) when the test sample is spiked with the positive control, the test sample is highly likely to contain PCR inhibitory substances, and the result should NOT be taken as negative. Repeated extraction and real-time PCR of the sample will be required.

If you require more detailed analysis information please contact Hong Kong DNA Chips for technical assistance.

### 4. TECHNICAL ASSISTANCE

Our technical staff will provide technical assistance you may need in using this kit. Simply call +(852) 2111 2123 during office hours:

**Monday – Friday: 9:00am to 5:30pm**  
**Saturday: 9:00am to 1:00pm**

A recorded message (in English, Cantonese or Putonghua) may be left outside office hours.

Alternatively, you may contact our technical staff by fax or email.

**Fax:** +(852) 2111 9762  
**Email:** technical@dnachip.com.hk

### 5. WARRANTIES AND LIABILITIES

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