



T7 3M RNA Polymerase HC

Highly concentrated triple mutant T7 RNA Polymerase for set-up of high yield in vitro transcription reactions

Cat. No.	Amount
RNT-019	50 µl (2 µg/µl)

For general laboratory use.

Shipping: shipped on gel packs

Storage Conditions: store at -20 °C

Additional Storage Conditions: avoid freeze/thaw cycles

Shelf Life: 12 months

Purity: ≥ 95 % (SDS-PAGE)

Form: liquid

Concentration: 2.0 – 2.2 µg/µl (A280, $\epsilon = 139 \text{ L mmol}^{-1} \text{ cm}^{-1}$ [1] in T7 3M RNA Polymerase HC Storage Buffer)

Description:

Bacteriophage T7 RNA Polymerase is a DNA-dependent RNA polymerase (99 kDa) that catalyzes *in vitro* RNA synthesis from a DNA sequence containing a T7 phage promoter.

The highly concentrated triple mutant (3M) is ideally suited for the incorporation of 2'-fluoro modified NTPs.

The provided T7 IVT Set-up Buffer, MgCl₂ and DTT solutions enable testing of different reaction conditions such as nucleotide/ MgCl₂ concentrations.

Activity: 1 µl T7 3M RNA Polymerase HC generates ≥ 20 µg RNA in 10 min at 37°. Activity assay conditions: 1x T7 IVT Set-up Buffer supplemented with 10 mM DTT, 12 mM MgCl₂, 3 mM NTPs, 1 µl T7 3M RNA Polymerase HC and 1 µg DNA template (1.4 kbp RNA transcript) in 20 µl. RNA yield was determined with a fluorescence microplate assay.

Content:

T7 3M RNA Polymerase HC

1x 50 µl (2 µg/µl)
50 mM Tris-HCl, 1 mM EDTA, 100 mM NaCl, 5 mM DTT, 0.1 % Triton-X-100, 50 % Glycerol (v/v), pH 8.0

T7 IVT Set-up Buffer

1x 200 µl (10x)
400 mM Tris-HCl (pH 8.0), 20 mM Spermidin

DTT

1x 100 µl (100 mM)

MgCl₂

1x 200 µl (200 mM)