T7 Polymerase

DNA dependant RNA Polymerase that exhibits high specificity

T7 RNA Polymerase is a DNA-dependent phage RNA polymerase with increased levels of specificity for its corresponding promoter sequence. Allele's T7 Polymerase provides a useful tool needed for multiple applications such as synthesis of:

♦ RNA transcripts for hybridization probes

♦Large amounts of nonlabeled RNA

♦In vitro synthesis of capped RNA transcripts.

All batches of T7 Polymerase have been tested for activity, purity, DNase, RNase, endonuclease, and transcription to ensure that this product is of the utmost quality. SP6 and T3 promoter regions are not recognized; only T7 promoters should be used as start site of transcription.

Box 1 | Product Info

Content	Qty
Cat#: ABP-PP-T7POL	
T7 RNA Polymerase	500 units
Also Included: ♦125µl 5x Transcription Buffer ♦125µl DTT	
Storage Buffer	
♦20mM potassium phosphate (pH 7.7 at 25°C), ♦1mM EDTA ♦10mM DTT ♦100mM NaCl, 0.1% (v/v) Triton® X-100 ♦50% (v/v) glycerol.	

Store at -20°C

Box 2 | T7 Promoter

TAATACGACTCACTATAGG^{+1}G

Minimum promoter sequence needed for transcription. G^{+1} is the first base integrated into RNA transcript.

Feautres

♦ Transcription 5X Buffer included
200mM Tris-HCl (pH 7.9 at 25°C), 50mM NaCl, 30mM MgCl2, 10mM spermidine

♦ Very high specificity

♦ Source: Recombinant *E.coli* strain

♦ QC tested to guarantee reliability and efficiency

Table 1 | Recommended Reaction Set Up for IVT

1. In the order listed, add the following reagents @ RT in a microcentrifuge tube or vial:		
Transcription 5X Buffer		10 µl
DTT, 100mM		5 µl
rNTP mix: 5mM rATP 5mM rUTP 5mM rCTP 0.5mM rGTP	**Allele Cat. #'s** ABP-PP-NTPSTDA ABP-PP-NTPSTDU ABP-PP-NTPSTDC ABP-PP-NTPSTDG	5 µl
ARCA Anti Reverse Cap Analog	**Allele Cat. #** ABP-PP-NTPARCA	5 µl
DNA template linearized (1ug/ul) H_2O or TE Buffer		5 µl
Allele T7 Polymerase	**Allele Cat. #** ABP-PP-T7POL	40 units
Nuclease-Free Water to final volume:		**50 µl**
2. Incubate for 1-2 hours at 37°C. *Proceed to purification of RNA product if necessary.*		