**E. coli RNA Polymerase, Holoenzyme**

**M0551S**

<table>
<thead>
<tr>
<th>50 units</th>
<th>Lot: 0021601</th>
<th>Exp: 1/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000 U/ml</td>
<td>Store at –20°C</td>
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**Description:** E. coli RNA Polymerase, Holoenzyme is the core enzyme saturated with sigma factor 70. The Holoenzyme initiates RNA synthesis from bacterial and phage promoters.

**Source:** E. coli RNA Polymerase, Holoenzyme is isolated from E. coli strain BL21. The sigma factor 70 is purified from an E. coli strain carrying the cloned gene for sigma factor 70.

**Applications:**
- RNA synthesis from E. coli promoter
- Transcription initiation studies
- In vitro translation with PURExpress

**Reagents Supplied with Enzyme:**
- 5X E. coli RNA Polymerase Reaction Buffer

**Reaction Conditions:** 1X E. coli RNA Polymerase Reaction Buffer, supplemented with 0.5 mM each NTP and DNA template. Incubate at 37°C.

**Unit Definition:** One unit is defined as the amount of enzyme required to incorporate 1 nmol NTP into RNA in 10 minutes at 37°C.

**Quality Assurance:** E. coli RNA Polymerase, Holoenzyme is free of detectable DNA endonuclease, exonuclease and RNase activities.

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**Description:** E. coli RNA Polymerase, Core Enzyme consists of 5 subunits designated α, α', β', β, and ω. The enzyme is free of sigma factor and does not recognize any specific bacterial or phage DNA promoters. The enzyme retains the ability to transcribe RNA from nonspecific initiation sequences. Addition of sigma factors will allow the enzyme to initiate RNA synthesis from specific bacterial and phage promoters. The core enzyme has a molecular weight of approximately 400 kDa.

**Source:** E. coli RNA Polymerase, Holoenzyme is isolated from E. coli strain BL21. The sigma factor 70 is purified from an E. coli strain carrying the cloned gene for sigma factor 70.

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Companion Products Sold Separately:

Ribonucleotide Solution Set
#N0450S 10 µmol of each
#N0450L 50 µmol of each

Ribonucleotide Solution Mix
#N0466S 10 µmol of each
#N0466L 50 µmol of each

RNase Inhibitor, Human Placenta
#M0307S 2,000 units
#M0307L 10,000 units

RNase Inhibitor, Murine
#M0314S 3,000 units
#M0314L 15,000 units

PURExpress® In Vitro Protein Synthesis Kit
#E6800S 10 reactions

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