Hi-T7™ RNA Polymerase (High Concentration)

Catalog #: M0470T

Concentration: 1,000,000 units/ml

Unit Definition: One unit is defined as the amount of enzyme required to incorporate 1 nmol ATP into acid-insoluble material in 1 hour at 50°C.

Shelf Life: 24 months

Storage Temp: -20°C

Storage Conditions: 50 mM Tris-HCl, 100 mM NaCl, 1 mM EDTA, 1 mM DTT, 0.1% Triton® X-100, 50% Glycerol, (pH 7.9 @ 25°C)

Specification Version: PS-M0470T v1.0

Effective Date: 04 Oct 2019

Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 150 units of Hi-T7™ RNA Polymerase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in NEBuffer 4 containing 1 µg of a mixture of single and double-stranded [³²P] E. coli DNA and a minimum of 150 units of Hi-T7™ RNA Polymerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Protein Purity Assay (SDS-PAGE) - Hi-T7™ RNA Polymerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

RNase Activity (Extended Digestion) - A 10 µl reaction in 1X NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 50 units of Hi-T7™ RNA Polymerase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

Derek Robinson
Director of Quality Control

Date 04 Oct 2019