

New England Biolabs Certificate of Analysis

Product Name: yDcpS
Catalog Number: M0463S
Concentration: 200,000 U/ml
Unit Definition: One unit is defined as the amount of yDcpS required to convert 50% of a 500 nM m7G-capped substrate to a 5'-diphosphorylated form in a total reaction volume of 20 µl in 1 hour at 37°C.
Packaging Lot Number: 10171899
Expiration Date: 01/2025
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl , 300 mM NaCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0463S v1.0

yDcpS Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0463SVIAL	yDcpS	10171898	Pass
B0463AVIAL	10X yDcpS Reaction Buffer	10167828	Pass

Assay Name/Specification	Lot # 10171899
Endonuclease Activity (Nicking) A 50 µl reaction in yDcpS Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 200 units of yDcpS incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in yDcpS Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 200 units of yDcpS incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Protein Purity Assay (SDS-PAGE) yDcpS is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity Assay (4 Hour Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 200 units of yDcpS is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis	Pass

Assay Name/Specification	Lot # 10171899
<p>using fluorescent detection.</p> <p>Phosphatase Activity (pNPP) A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 200 units of yDcpS incubated for 4 hours at 37°C yields <0.00001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.</p>	<p>Pass</p>

This product has been tested and shown to be in compliance with all specifications.

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Jessica Cane
Production Scientist
06 Jan 2023



Michael Tonello
Packaging Quality Control Inspector
10 Jan 2023