240 County Road
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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:	*10229327*
Expiration Date:	*02/2026*
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	10227073	**Pass**
B0463AVIAL	10X yDcpS Reaction Buffer	10227074	**Pass**

Assay Name/Specification	**Lot # 10229327**
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**
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.	**Pass**
Protein Purity Assay (SDS-PAGE) yDcpS is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue	**Pass**

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Assay Name/Specification	Lot # 10229327
detection. **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 using fluorescent detection.	**Pass**

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Jessica Cane
Production Scientist
20 Feb 2024

Josh Hersey
Packaging Quality Control Inspector
13 Mar 2024