

New England Biolabs Certificate of Analysis

Product Name: Mbol
Catalog Number: R0147S
Concentration: 5,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam-) in 1 hour at 37°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10140683
Expiration Date: 12/2023
Storage Temperature: -20°C
Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA
Specification Version: PS-R0147S/L v1.0

Mbol Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0147SVIAL	Mbol	10131162	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10130600	Pass
B6004SVIAL	rCutSmart™ Buffer	10132770	Pass

Assay Name/Specification	Lot # 10140683
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda dam- DNA and a minimum of 50 Units of Mbol incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda dam- DNA with Mbol, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with Mbol.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 50 units of Mbol incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Endonuclease Activity (Nicking)	Pass

Assay Name/Specification	Lot # 10140683
A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of MboI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	

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.



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Production Scientist
09 Mar 2022



Michael Tonello
Packaging Quality Control Inspector
09 Mar 2022