

be INSPIRED *drive* DISCOVERY *stay* GENUINE

240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350 www.neb.com info@neb.com

New England Biolabs Certificate of Analysis

Product Name:	Esp3l
Catalog Number:	R0734S
Concentration:	10,000 U/ml
Unit Definition:	One unit is defined as the amount of enzyme required to digest 1 μ g of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 μ l.
Packaging Lot Number:	10084481
Expiration Date:	09/2022
Storage Temperature:	-20°C
Storage Conditions:	300 mM NaCl , 10 mM Tris-HCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 500 μg/ml BSA, (pH 7.4 @ 25°C)
Specification Version:	PS-R0734S/L v1.0

Esp3I Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R0734SVIAL	Esp3I	10084480	Pass	
B7204SVIAL	CutSmart® Buffer	10081171	Pass	
B7024AVIAL	Gel Loading Dye, Purple (6X)	10084971	Pass	

Assay Name/Specification	Lot # 10084481
RNase Activity (Extended Digestion) A 10 μ I reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 10 units of Esp3I is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass
Protein Purity Assay (SDS-PAGE) Esp3I is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and a minimum of 100 units of Esp3I incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	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 100 units of Esp3l incubated for	Pass





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Assay Name/Specification	Lot # 10084481
4 hours at 37°C releases <0.1% of the total radioactivity.	
Functional Testing (15 minute Digest) A 50 μl reaction in CutSmart® Buffer containing 1 μg of Lambda DNA and 1 μl of Esp3l incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with Esp3I, ≥95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with Esp3I.	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.

JianYing Luo Production Scientist 23 Oct 2020

Josh Hersey

Packaging Quality Control Inspector 23 Oct 2020

