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## New England Biolabs Certificate of Analysis

Product Name: I-Scel
Catalog Number: R0694L
Concentration: 5,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme required to cleave 1 µg

of pGPS2 Notl-linearized Control Plasmid in rCutSmart Buffer in 1

hour at 37°C in a total reaction volume of 50 μl.

Packaging Lot Number: 10156853
Expiration Date: 06/2024
Storage Temperature: -80°C

Storage Conditions: 10 mM Tris-HCl, 300 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol,

500 μg/ml rAlbumin (pH 7.4 @ 25°C)

Specification Version: PS-R0694S/L v2.0

I-Scel Component List				
<b>NEB Part Number</b>	Component Description	Lot Number	Individual QC Result	
R0694LVIAL	I-Scel	10156852	Pass	
N0420SVIAL	pGPS2 NotI-linearized Control Plasmid	10156707	Pass	
B6004SVIAL	rCutSmart™ Buffer	10156426	Pass	

Assay Name/Specification	Lot # 10156853
Ligation and Recutting (Terminal Integrity)	Pass
After a 10-fold over-digestion of pGPS2-NotI DNA with I-SceI, >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 I-SceI.	
Protein Purity Assay (SDS-PAGE) I-SceI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Endonuclease Activity (Nicking) A 50 μl reaction in rCutSmart™ Buffer containing 1 μg of supercoiled PhiX174 DNA and a minimum of 15 units of I-Scel incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ ³H] E. coli DNA and a minimum of 50 units of I-Scel incubated for	Pass



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Assay Name/Specification	Lot # 10156853
4 hours at 37°C releases <0.1% of the total radioactivity.	
qPCR DNA Contamination (E. coli Genomic)  A minimum of 5 units of I-Scel is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of pGPS2-NotI DNA and a minimum of 50 units of I-Scel incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	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.

Penghua Zhang **Production Scientist** 

05 Aug 2022

Michael Tonello

Packaging Quality Control Inspector

05 Aug 2022



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