NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
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New England Biolabs
Certificate of Analysis

Product Name:	*FatI*
Catalog Number:	*R0650L*
Concentration:	*2,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of pUC19 DNA in NEBuffer r2.1 in 1 hour at 55°C in a total reaction volume of 50 µl.*
Packaging Lot Number:	*10203107*
Expiration Date:	*08/2025*
Storage Temperature:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl, 50 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)*
Specification Version:	*PS-R0650S/L v2.0*

FatI Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0650LVIAL	FatI	10201947	**Pass**
B6002SVIAL	NEBuffer™ r2.1	10173667	**Pass**

Assay Name/Specification	**Lot # 10203107**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 10 units of FatI incubated for 4 hours at 55°C releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pUC19 DNA with FatI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with FatI.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer™ r2.1 containing 1 µg of pUC19 DNA and a minimum of 10 units of FatI incubated for 16 hours at 55ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Protein Purity Assay (SDS-PAGE) FatI is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**

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Assay Name/Specification	Lot # 10203107
qPCR DNA Contamination (E. coli Genomic) A minimum of 2 units of FatI 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**

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.

YunJie Sun
Production Scientist
10 Aug 2023

Michael Tonello
Packaging Quality Control Inspector
18 Aug 2023