

New England Biolabs Certificate of Analysis

Product Name: *FatI*
Catalog Number: *R0650S*
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: *10229218*
Expiration Date: *01/2026*
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*

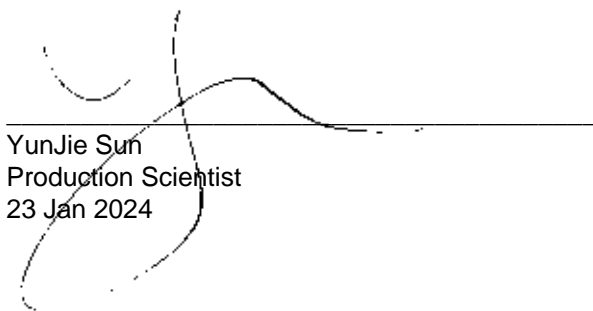
FatI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0650SVIAL	FatI	10222152	Pass
B6002SVIAL	NEBuffer™ r2.1	10211339	Pass

Assay Name/Specification	Lot # 10229218
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 16°C. 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 55°C 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

Assay Name/Specification	Lot # 10229218
<p>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.</p>	<p>Pass</p>

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
23 Jan 2024



Michael Tonello
Packaging Quality Control Inspector
15 Feb 2024