

New England Biolabs Certificate of Analysis

Product Name: *FseI*
Catalog Number: *R0588S*
Concentration: *2,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to digest 1 µg of pBC4 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number: *10110104*
Expiration Date: *06/2022*
Storage Temperature: *-80°C*
Storage Conditions: *10 mM Tris-HCl , 100 mM KCl , 1 mM DTT , 0.1 mM EDTA , 0.5 % Tween® 20 , 0.5 % IGEPAL® CA-630 , 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version: *PS-R0588S/L v3.0*

FseI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0588SVIAL	FseI	10110105	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10093123	Pass
B6004SVIAL	rCutSmart™ Buffer	10108412	Pass

Assay Name/Specification	Lot # 10110104
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pBC4 DNA and a minimum of 10 units of FseI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
Protein Purity Assay (SDS-PAGE) FseI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pBC4 DNA with FseI, >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 FseI.	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 10 units of FseI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass

Assay Name/Specification	Lot # 10110104
<p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 10 Units of FseI incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	<p>Pass</p>

This product has been tested and shown to be in compliance with all specifications.

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Penghua Zhang
Production Scientist
25 Jun 2021



Jason Davis
Packaging Quality Control Inspector
25 Jun 2021