

## 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:** 10069198  
**Expiration Date:** 03/2021  
**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	10069197	Pass
B7204SVIAL	CutSmart® Buffer	10069109	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10059231	Pass

Assay Name/Specification	Lot # 10069198
<b>Endonuclease Activity (Nicking)</b> 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.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> 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
<b>Ligation and Recutting (Terminal Integrity)</b> 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
<b>Non-Specific DNase Activity (16 Hour)</b> 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	Pass

Assay Name/Specification	Lot # 10069198
<p>detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p><b>Protein Purity Assay (SDS-PAGE)</b> Fsel is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	<p><b>Pass</b></p>

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



Stephanie Cornelio  
Production Scientist  
11 Mar 2020



Michael Tonello  
Packaging Quality Control Inspector  
30 Mar 2020