

## 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:** *10131408*  
**Expiration Date:** *08/2022*  
**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	10119270	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10127723	Pass
B6004SVIAL	rCutSmart™ Buffer	10127378	Pass

Assay Name/Specification	Lot # 10131408
<p><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 detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Protein Purity Assay (SDS-PAGE)</b>            FseI is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	Pass
<p><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 &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of pBC4 DNA with FseI, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with FseI.</p>	Pass

Assay Name/Specification	Lot # 10131408
<p><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 &lt;0.1% of the total radioactivity.</p>	<p><b>Pass</b></p>

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

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30 Dec 2021



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Packaging Quality Control Inspector  
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