

## New England Biolabs Certificate of Analysis

**Product Name:** RecJf  
**Catalog Number:** M0264L  
**Concentration:** 30,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to produce 0.05 nmol TCA soluble deoxyribonucleotide in a total reaction volume of 50 µl in 30 minutes at 37°C.  
**Packaging Lot Number:** 10178452  
**Expiration Date:** 01/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 200 µg/ml BSA , 50 % Glycerol, (pH 7.4 @ 25°C)  
**Specification Version:** PS-M0264S/L v2.0

RecJf Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0264LVIAL	RecJf	10176271	Pass
B7002SVIAL	NEBuffer™ 2	10162785	Pass

Assay Name/Specification	Lot # 10178452
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 90 units of RecJf incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Endonuclease Activity (Circular Single Stranded DNA)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of PhiX174 Virion DNA and a minimum of 90 units of RecJf incubated for 4 hours at 37°C results in <10% conversion to linear DNA as determined by agarose gel electrophoresis.	Pass
<b>Ligation and Recutting (Terminal Integrity, Digested DNA)</b> A 50 µl reaction in 1X CutSmart® Buffer containing 4 µg of pUC19-SphI digest and a minimum of 60 units of RecJf incubated for 4 hours at 37°C results in >95% ligation of the DNA fragments as determined by agarose gel electrophoresis. Of these ligated fragments, >95% can be recut with SphI.	Pass
<b>RNase Activity Assay (4 Hour Digestion)</b> A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA	Pass

Assay Name/Specification	Lot # 10178452
<p>and a minimum of 30 units of RecJf is incubated at 37°C. After incubation for 4 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p> <p><b>Ligation and Recutting (Terminal Integrity, Digested DNA)</b> A 50 µl reaction in 1X CutSmart® Buffer containing 4 µg of PhiX174-HaeIII digest and a minimum of 60 units of RecJf incubated for 4 hours at 37°C results in &gt;95% ligation of the DNA fragments as determined by agarose gel electrophoresis. Of these ligated fragments, &gt;95% can be recut with HaeIII.</p>	<p><b>Pass</b></p>

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

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Production Scientist  
19 Jan 2023



Josh Hersey  
Packaging Quality Control Inspector  
20 Jan 2023