

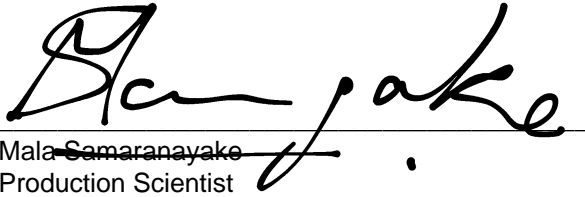
## New England Biolabs Certificate of Analysis

**Product Name:** CviAll  
**Catalog Number:** R0640S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of pUC19 DNA in 1 hour at 25°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10062987  
**Expiration Date:** 12/2020  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl, 250 mM NaCl, 10 mM TCEP-HCl, 1 mM DTT, 0.1 mM EDTA, 0.15% Triton®X-100, 50% Glycerol, 200 µg/ml BSA, (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0640S/L v2.0

CviAll Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0640SVIAL	CviAll	10062986	Pass
B7204SVIAL	CutSmart® Buffer	10055736	Pass

Assay Name/Specification	Lot # 10062987
<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 CviAll incubated for 4 hours at 25°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of pUC19 DNA with CviAll, >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 CviAll.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of pUC19 DNA and a minimum of 30 units of CviAll incubated for 16 hours at 25°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

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



Mala Samaranayake  
Production Scientist  
13 Dec 2019



Michael Tonello  
Packaging Quality Control Inspector  
16 Dec 2019