NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
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New England Biolabs
Certificate of Analysis

Product Name:	*Tte-UvrD Helicase*
Catalog Number:	*M1202S*
Concentration:	*20 µg/ml*
Lot Number:	*10041635*
Expiration Date:	*01/2021*
Storage Temperature:	*-20°C*
Storage Conditions:	*10 mM Tris-HCl , 100 mM KCl , 1 mM DTT , 0.1 mM EDTA , 0.1 % Triton®X-100 , 50 % Glycerol, (pH 7.4 @ 25°C)*
Specification Version:	*PS-M1202S v1.0*

Tte-UvrD Helicase Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
P0756SVIAL	Adenosine 5'-Triphosphate (ATP)	10034352	**Pass**
M1202SVIAL	Tte-UvrD Helicase	10041595	**Pass**
B0537SVIAL	Isothermal Amplification Buffer	10035085	**Pass**

Assay Name/Specification	Lot # 10041635
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 2 µg of Tte-UvrD Helicase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**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 2 µg of Tte-UvrD Helicase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**Pass**
Functional Testing (ATP-dependent LAMP Inhibition) Tte-UvrD Helicase is tested for ATP-dependent inhibition of a LAMP reaction and suppression of amplification in a no template control reaction.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 2 µg of Tte-UvrD Helicase incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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Assay Name/Specification	Lot # 10041635
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Tte-UvrD Helicase is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**
Protein Purity Assay (SDS-PAGE) Tte-UvrD Helicase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**

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

Alicia Bielik
Production Scientist
25 Jan 2019

Michael Tonello
Packaging Quality Control Inspector
02 Apr 2019