

New England Biolabs Product Specification

<i>Product Name:</i>	<i>Tte-UvrD Helicase</i>
<i>Catalog #:</i>	<i>M1202S</i>
<i>Concentration:</i>	<i>20 µg/ml</i>
<i>Shelf Life:</i>	<i>24 months</i>
<i>Storage Temp:</i>	<i>-20°C</i>
<i>Storage Conditions:</i>	<i>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)</i>
<i>Specification Version:</i>	<i>PS-M1202S v1.0</i>
<i>Effective Date:</i>	<i>21 Nov 2018</i>

Assay Name/Specification (minimum release criteria)

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.

Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³H] *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.

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.

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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Protein Purity Assay (SDS-PAGE) - Tte-UvrD Helicase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

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.



Date 21 Nov 2018

Derek Robinson
Director of Quality Control

