

New England Biolabs Product Specification

<i>Product Name:</i>	<i>Duplex DNase</i>
<i>Catalog #:</i>	<i>M7635S/L</i>
<i>Concentration:</i>	<i>2,000 units/ml</i>
<i>Unit Definition:</i>	<i>One unit is the amount of enzyme required to release 50 pmol of FAM from a 35 bp FAM-BHQ1 labeled hairpin dsDNA oligo in 1 minute at 30°C in a 50 µL reaction in 1X NEBuffer r1.1.</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, 50 mM KCl, 50% Glycerol (pH 7.4 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-M7635S/L v1.0</i>
<i>Effective Date:</i>	<i>20 Nov 2023</i>

Assay Name/Specification (minimum release criteria)

Protease Activity (SDS-PAGE) - A 20 µl reaction in 1X rCutSmart™ Buffer containing 24 µg of a standard mixture of proteins and a minimum of 2 units of Duplex DNase incubated for 18 hours at 37°C, results in no detectable degradation of the protein mixture as determined by SDS-PAGE with Coomassie Blue detection.

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

qPCR DNA Contamination (Eukaryotic Genomic) - A minimum of 2 units of Duplex DNase is screened for the presence of eukaryotic genomic DNA using SYBR® Green qPCR with universal primers for the 18S rRNA locus. Results are quantified using a standard curve generated from purified eukaryotic genomic DNA. The measured level of eukaryotic genomic DNA contamination is ≤ 2.5 pg DNA/µl.

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 2 units of Duplex DNase is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

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Date 20 Nov 2023

Lauren Brown
Quality Approver

