NEW ENGLAND BioLabs® Inc.

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New England Biolabs
Product Specification

Product Name:	*Exonuclease VIII, truncated*
Catalog #:	*M0545S/L*
Concentration:	*10,000 units/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to produce 1 nmol of acid-soluble deoxyribonucleotide from double-stranded DNA in a total reaction volume of 50 µl in 30 minutes at 37°C in 1X NEBuffer 4 with 0.15 mM sonicated duplex [^{3}H]-DNA.*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Storage Conditions:	*50 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.1 % Triton X-100, (pH 7.5 @ 25° C)*
Specification Version:	*PS-M0545S/L v1.0*
Effective Date:	*22 May 2018*

Assay Name/Specification (minimum release criteria)
Endonuclease Activity (Circular Single Stranded DNA) - A 50 µl reaction in NEBuffer 4 containing 1 µg of M13mp18 Single-stranded DNA and a minimum of 30 units of Exonuclease VIII, truncated incubated for 4 hours at 37°C results in <10% conversion to linear DNA as determined by agarose gel electrophoresis.
Endonuclease Activity (Nicked Circular DNA) - A 50 µl reaction in NEBuffer 4 containing 1 µg of PhiX174 RF II DNA and a minimum of 30 units of Exonuclease VIII, truncated incubated for 4 hours at 37°C results in <10% conversion to linear DNA as determined by agarose gel electrophoresis.
Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 4 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of Exonuclease VIII, truncated incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.
Protein Purity Assay (SDS-PAGE) - Exonuclease VIII, truncated 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 10 units of Exonuclease VIII, truncated 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.

Date 22 May 2018

Derek Robinson
Director of Quality Control

ISO 9001 Registered Quality Management
ISO 14001 Registered Environmental Management
ISO 13485 Registered Medical Devices