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New England Biolabs
Product Specification

Product Name:	*Histone H3.1 Human, Recombinant*
Catalog #:	*M2503S*
Concentration:	*1 mg/ml*
Unit Definition:	*N/A*
Shelf Life:	*24 months*
Storage Temp:	*-20°C*
Storage Conditions:	*300 mM NaCl, 20 mM NaPO$_4$, 1 mM DTT, 1 mM EDTA, (pH 7.0 @ 25°C)*
Specification Version:	*PS-M2503S v2.0*
Effective Date:	*19 Jan 2021*

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking) - A 50 μl reaction in NEBuffer 2 containing 1 μg of supercoiled PhiX174 RF I DNA and a minimum of 10 μg of Histone H3.1 Human, Recombinant incubated for 4 hours at 37°C results in <10% conversion to RFII as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in NEBuffer 2 containing 1 μg of a mixture of single and double-stranded [^{3}H] *E. coli* DNA and a minimum of 10 μg of Histone H3.1 Human, Recombinant incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Molecular Weight Determination (Mass Spectrometry) - The molecular weight of Histone H3.1 Human, Recombinant is between 15,271.71 and 15,273.89 as determined by mass spectrometry analysis.

Protease Activity (Histones) - A 12 μl reaction containing 7 μl of a standard mixture of proteins and a minimum of 5 μg of Histone H3.1 Human, Recombinant incubated for 4 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) - Histone H3.1 Human, Recombinant is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

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Date   19 Jan 2021

Derek Robinson
Director, Quality Control

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