

New England Biolabs Product Specification

<i>Product Name:</i>	<i>Streptavidin</i>
<i>Catalog #:</i>	<i>N7021S</i>
<i>Concentration:</i>	<i>1 mg/ml</i>
<i>Shelf Life:</i>	<i>24 months</i>
<i>Storage Temp:</i>	<i>-20°C</i>
<i>Storage Conditions:</i>	<i>140 mM NaCl, 8 mM Sodium Phosphate, 2 mM Potassium Phosphate, 10 mM KCl, (pH 7.4 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-N7021S v2.0</i>
<i>Effective Date:</i>	<i>27 Jul 2021</i>

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 3 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 1 µg of Streptavidin 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 NEBuffer 3 containing 1 µg of a mixture of single and double-stranded [³H] *E. coli* DNA and a minimum of 1 µg of Streptavidin incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Functional Testing (Single Stranded DNA Binding - FAM Labeled Oligo) - A 20 µl reaction in NEBuffer 3 containing 3 µM FAM and Biotin-labeled 50-mer and a maximum of 1 µg of Streptavidin incubated for 5 minutes at 25°C produces a mobility shift in >95% of the starting material as determined by TBE gel electrophoresis and UV imaging.

Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer 3 containing 1 µg of Lambda DNA and a minimum of 1 µg of Streptavidin 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) - Streptavidin is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

RNase Activity (Extended Digestion) - A 10 µl reaction in NEBuffer 3 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µg of Streptavidin is incubated at 37°C. After incubation for 2 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

Specific Activity - 1 mg of Streptavidin is required to bind ≥14 µg of Biotin.



New England Biolabs Product Specification

One or more products referenced in this document may be covered by a 3rd-party trademark.
Please visit www.neb.com/trademarks for additional information.



Date 27 Jul 2021

Derek Robinson
Director, Quality Control

