

New England Biolabs Certificate of Analysis

Product Name: *Streptavidin*
Catalog Number: *N7021S*
Concentration: *1 mg/ml*
Unit Definition: *One unit is defined as the amount of Streptavidin required to bind 1 µg of Biotin.*
Packaging Lot Number: *10063074*
Expiration Date: *11/2021*
Storage Temperature: *-20°C*
Storage Conditions: *140 mM NaCl, 8 mM Sodium Phosphate, 2 mM Potassium Phosphate, 10 mM KCl, (pH 7.4 @ 25°C)*
Specification Version: *PS-N7021S v1.0*

Streptavidin Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
N7021SVIAL	Streptavidin	10058336	Pass

Assay Name/Specification	Lot # 10063074
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.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 3 containing 1 µg of a mixture of single and double-stranded [³ H] 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.	Pass
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.	Pass
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.	Pass

Assay Name/Specification	Lot # 10063074
<p>Protein Purity Assay (SDS-PAGE) Streptavidin is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>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.</p>	Pass

This product has been tested and shown to be in compliance with all specifications.



Bo Wu
Production Scientist
22 Nov 2019



Jay Minichiello
Packaging Quality Control Inspector
25 Feb 2020