

New England Biolabs Certificate of Analysis

Product Name: Streptavidin
Catalog Number: N7021S
Concentration: 1 mg/ml
Packaging Lot Number: 10228616
Expiration Date: 01/2026
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 v2.0

Streptavidin Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
N7021SVIAL	Streptavidin	10222148	Pass

Assay Name/Specification	Lot # 10228616
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
Protein Purity Assay (SDS-PAGE)	Pass

Assay Name/Specification	Lot # 10228616
Streptavidin is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	
<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
<p>Specific Activity 1 mg of Streptavidin is required to bind $\geq 14 \mu$g of Biotin.</p>	Pass

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

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.



Bo Wu
Production Scientist
19 Jan 2024



Michael Tonello
Packaging Quality Control Inspector
22 Jan 2024