

## 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:** 10086154  
**Expiration Date:** 10/2022  
**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	10086155	Pass

Assay Name/Specification	Lot # 10086154
<p><b>Endonuclease Activity (Nicking)</b>            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 &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in NEBuffer 3 containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 1 µg of Streptavidin incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Functional Testing (Single Stranded DNA Binding - FAM Labeled Oligo)</b>            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 &gt;95% of the starting material as determined by TBE gel electrophoresis and UV imaging.</p>	Pass
<p><b>Non-Specific DNase Activity (16 Hour)</b>            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.</p>	Pass

Assay Name/Specification	Lot # 10086154
<p><b>Protein Purity Assay (SDS-PAGE)</b> Streptavidin is <math>\geq 95\%</math> pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b> A 10 <math>\mu</math>l reaction in NEBuffer 3 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 <math>\mu</math>g of Streptavidin is incubated at 37°C. After incubation for 2 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>

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

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Production Scientist  
30 Nov 2020



Josh Hersey  
Packaging Quality Control Inspector  
30 Nov 2020