

## 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.  
**Lot Number:** 10047132  
**Expiration Date:** 06/2021  
**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	10047133	Pass

Assay Name/Specification	Lot # 10047132
<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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<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 <0.1% of the total radioactivity.	Pass
<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 >95% of the starting material as determined by TBE gel electrophoresis and UV imaging.	Pass
<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.	Pass

Assay Name/Specification	Lot # 10047132
<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, <math>&gt;90\%</math> 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.



Bo Wu  
Production Scientist  
01 Jul 2019



Michael Tonello  
Packaging Quality Control Inspector  
08 Jul 2019