

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: 10030293
Expiration Date: 01/2021
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	10030294	Pass

Assay Name/Specification	Lot # 10030293
<p>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.</p>	Pass
<p>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.</p>	Pass
<p>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.</p>	Pass
<p>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.</p>	Pass

Assay Name/Specification	Lot # 10030293
<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
10 Jan 2019



Michael Tonello
Packaging Quality Control Inspector
11 Jan 2019