

New England Biolabs Certificate of Analysis

Product Name: Streptavidin
Catalog Number: N7021S
Concentration: 1 mg/ml
Packaging Lot Number: 10177689
Expiration Date: 01/2025
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	10176569	Pass

Assay Name/Specification	Lot # 10177689
Specific Activity 1 mg of Streptavidin is required to bind ≥ 14 μ g of Biotin.	Pass
Protein Purity Assay (SDS-PAGE) Streptavidin is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
RNase Activity (Extended Digestion) A 10 μ l reaction in NEBuffer 3 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 μ g 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.	Pass
Endonuclease Activity (Nicking) A 50 μ l reaction in NEBuffer 3 containing 1 μ g of supercoiled PhiX174 DNA and a minimum of 1 μ g of Streptavidin incubated for 4 hours at 37°C results in $<10\%$ conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Functional Testing (Single Stranded DNA Binding - FAM Labeled Oligo) A 20 μ l reaction in NEBuffer 3 containing 3 μ M FAM and Biotin-labeled 50-mer and a maximum of 1 μ g 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	Pass


Assay Name/Specification	Lot # 10177689
<p>UV imaging.</p> <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>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

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

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Production Scientist
06 Jan 2023



Michael Tonello
Packaging Quality Control Inspector
10 Jan 2023