NEW ENGLAND BioLabs Inc.
be INSPIRED drive DISCOVERY stay GENUINE
240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
info@neb.com

New England Biolabs
Certificate of Analysis

Product Name:	*Streptavidin*
Catalog Number:	*N7021S*
Concentration:	*1 mg/ml*
Packaging Lot Number:	*10185470*
Expiration Date:	*04/2025*
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	10182277	**Pass**

Assay Name/Specification	**Lot # 10185470**
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 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
Protein Purity Assay (SDS-PAGE)	**Pass**

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Assay Name/Specification	Lot # 10185470
Streptavidin is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	
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.	**Pass**
Specific Activity 1 mg of Streptavidin is required to bind ≥14 µg of Biotin.	**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
24 Mar 2023

Josh Hersey
Packaging Quality Control Inspector
11 Apr 2023