

## New England Biolabs Certificate of Analysis

**Product Name:** *Shrimp Alkaline Phosphatase (rSAP)*  
**Catalog Number:** M0371S  
**Concentration:** 1,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that hydrolyzes 1  $\mu\text{mol}$  of *p*-Nitrophenyl Phosphate, PNPP in a total reaction volume of 1 ml in 1 minute at 37°C  
**Packaging Lot Number:** 10200636  
**Expiration Date:** 03/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 25 mM Tris-HCl , 1 mM MgCl<sub>2</sub> , 50 % Glycerol, (pH 7.5 @ 25°C)  
**Specification Version:** PS-M0371S/L v1.0

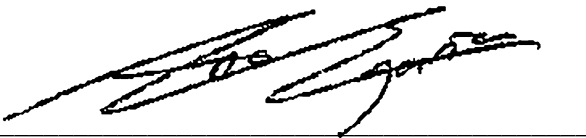
Shrimp Alkaline Phosphatase (rSAP) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0371SVIAL	Shrimp Alkaline Phosphatase (rSAP)	10181516	Pass
B6004SVIAL	rCutSmart™ Buffer	10193043	Pass

Assay Name/Specification	Lot # 10200636
<p><b>Endonuclease Activity (Nicking)</b>            A 50 <math>\mu\text{l}</math> reaction in CutSmart® Buffer containing 1 <math>\mu\text{g}</math> of supercoiled PhiX174 DNA and a minimum of 5 units of Shrimp Alkaline Phosphatase (rSAP) 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 <math>\mu\text{l}</math> reaction in CutSmart® Buffer containing 1 <math>\mu\text{g}</math> of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 10 units of Shrimp Alkaline Phosphatase (rSAP) incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 <math>\mu\text{l}</math> reaction in NEBuffer 4 containing 1 <math>\mu\text{g}</math> of PhiX174-HaeIII DNA and a minimum of 10 units of Shrimp Alkaline Phosphatase (rSAP) 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
<p><b>Protein Purity Assay (SDS-PAGE)</b></p>	Pass

Assay Name/Specification	Lot # 10200636
<p>Shrimp Alkaline Phosphatase (rSAP) is <math>\geq 95\%</math> pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> <p><b>RNase Activity (Extended Digestion)</b> A 10 <math>\mu</math>l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 <math>\mu</math>l of Shrimp Alkaline Phosphatase (rSAP) is incubated at 37°C. After incubation for 16 hours, <math>&gt;90\%</math> of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<p><b>Pass</b></p>

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

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03 Aug 2023



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03 Aug 2023