

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 μ mol of *p*-Nitrophenyl Phosphate, PNPP in a total reaction volume of 1 ml in 1 minute at 37°C
Lot Number: 10008070
Expiration Date: 05/2020
Storage Temperature: -20°C
Storage Conditions: 25 mM Tris-HCl , 1 mM MgCl₂ , 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)	10008071	Pass
B7204SVIAL	CutSmart® Buffer	3061804	Pass

Assay Name/Specification	Lot # 10008070
<p>Endonuclease Activity (Nicking) A 50 μl reaction in CutSmart® Buffer containing 1 μg of supercoiled PhiX174 DNA and a minimum of 5 units of Shrimp Alkaline Phosphatase (rSAP) 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 CutSmart® Buffer containing 1 μg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 10 units of Shrimp Alkaline Phosphatase (rSAP) 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 4 containing 1 μg 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>Protein Purity Assay (SDS-PAGE)</p>	Pass

Assay Name/Specification	Lot # 10008070
<p>Shrimp Alkaline Phosphatase (rSAP) is \geq 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> <p>RNase Activity (Extended Digestion) A 10 μl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 μl of Shrimp Alkaline Phosphatase (rSAP) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<p>Pass</p>

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



Heidi Church
Production Scientist
23 May 2018



Michael Tonello
Packaging Quality Control Inspector
24 May 2018