NEW ENGLAND BioLabs Inc.
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240 County Road
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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 µmol of p-Nitrophenyl Phosphate, PNPP in a total reaction volume of 1 ml in 1 minute at 37°C*
Packaging Lot Number:	*10057229*
Expiration Date:	*07/2021*
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)	10048763	**Pass**
B7204SVIAL	CutSmart® Buffer	10046082	**Pass**

Assay Name/Specification	**Lot # 10057229**
Protein Purity Assay (SDS-PAGE) Shrimp Alkaline Phosphatase (rSAP) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**
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 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**Pass**
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 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**
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	**Pass**

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Assay Name/Specification	Lot # 10057229
37ºC results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 10 units of Shrimp Alkaline Phosphatase (rSAP) incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**

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

Ana Egana
Production Scientist
02 Jan 2020

Jay Minichiello
Packaging Quality Control Inspector
02 Jan 2020