

New England Biolabs Certificate of Analysis

Product Name: Shrimp Alkaline Phosphatase (rSAP)
Catalog #: M0371S/L
Concentration: 1,000 units/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
Lot #: 0031608
Assay Date: 08/2016
Expiration Date: 8/2018
Storage Temp: -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
Effective Date: 07 Jul 2016

| Assay Name/Specification (minimum release criteria) | Lot #0031608 |
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| 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. | Pass |
| Exonuclease Activity (Radioactivity Release) - A 50 μl reaction in CutSmart® Buffer containing 1 μg of a mixture of single and double-stranded [³ H] <i>E. coli</i> 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. | 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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass |
| Protein Purity Assay (SDS-PAGE) - Shrimp Alkaline Phosphatase (rSAP) is \geq 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 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection. | Pass |



Authorized by
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07 Jul 2016



Inspected by
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17 Aug 2016

