

Shrimp Alkaline Phosphatase, (recombinant)

Catalog #ENZ-PRT161

- Heat-labile, all-purpose alkaline phosphatase
- Completely inactivated after 5 min at 65°C
- Fast and easy dephosphorylation of DNA, RNA and nucleotides
- Active in most restriction enzyme buffers, no need for extra addition of buffer of ions
- Excellent stability at 4°C and room temperature.

Properties

Recombinant Shrimp Alkaline Phosphatase is a multipurpose alkaline phosphatase that can be fully inactivated by a short heat treatment (**Figure 1**). This property simplifies most workflows involving alkaline phosphatase treatment.

The recombinant form of SAP replaces the native form of SAP that has been established on the market for several years. Shrimp Alkaline Phosphatase, (recombinant) has all the properties of the well proven SAP, but with additional benefits. Shrimp Alkaline Phosphatase, (recombinant) is far more stable at ambient temperature (**Figure 2**), is also of high, consistent purity, and is available in large batches at high concentration.

Source: Arctic shrimp origin, recombinantly produced in *Pichia pastoris*.

Activity: Optimum working range for Shrimp Alkaline Phosphatase, (recombinant) is between pH 7-9. Shrimp Alkaline Phosphatase, (recombinant) is active in most restriction and PCR buffers. Mg²⁺ (>1 mM) is required for activity.

Heat inactivation: Shrimp Alkaline Phosphatase, (recombinant) is completely inactivated by a 5 min incubation at 65°C.

Storage: Minimum shelf life is 2 years at -20°C. Storage at 4°C is possible for at least 6 months and 3 months at 25°C. The enzyme also tolerates multiple freeze-thaw cycles.

Purity: Shrimp Alkaline Phosphatase is highly pure and is tested free of contaminating nucleases.

Specific activity: > 2000 Units/mg.

Unit definition: One unit of Shrimp Alkaline Phosphatase release 1 μmol phosphate/min from 4-nitrophenyl phosphate in 0.1 M glycine-NaOH pH 10.4, 1 mM MgCl₂, 1 mM ZnCl₂ and 6 mM 4 nitrophenyl phosphate.

Easy and quick heat-inactivation

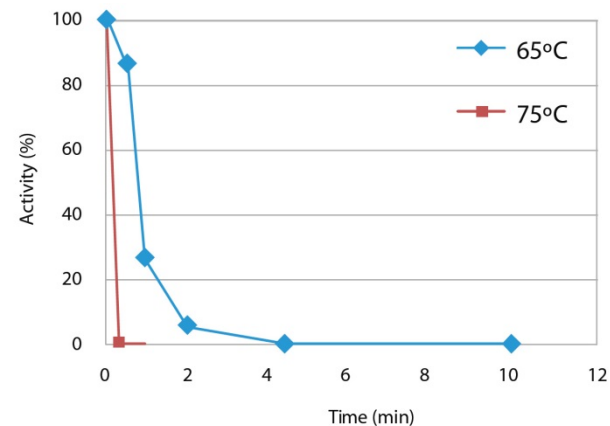


Figure 1: Heat inactivation of rSAP at 65°C and 70°C

Stable at room temperature

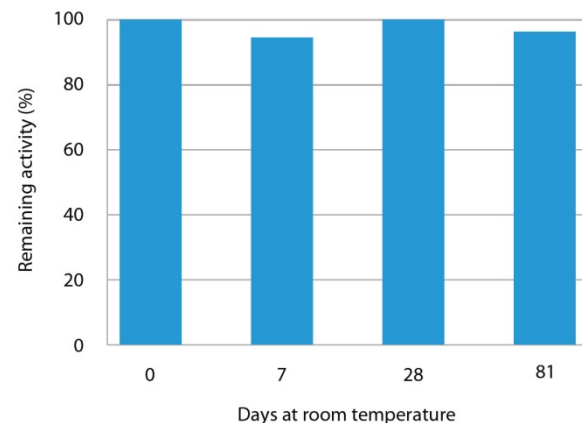
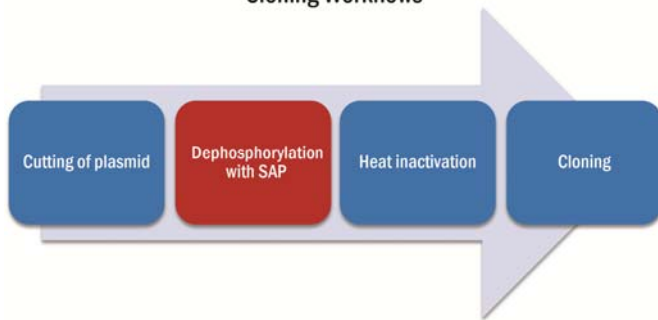


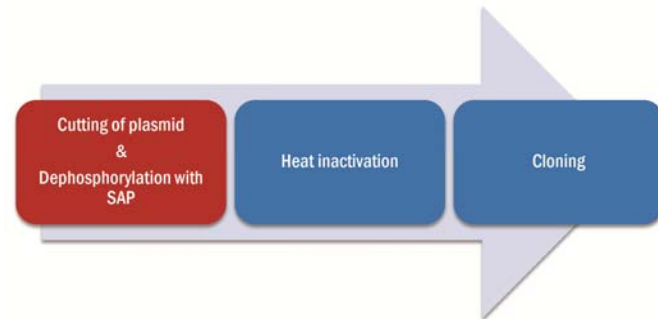
Figure 2: Stability of rSAP at room temperature

Workflows

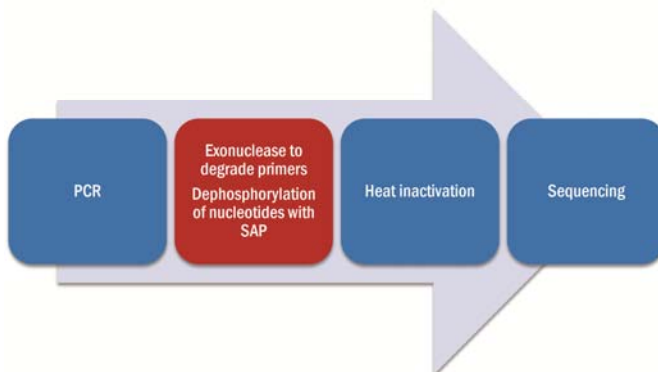
Cloning Workflows



OR



Sequencing Workflow



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