

Shrimp Alkaline Phosphatase(SAP)

Cat: C9443

Size: 500U

Storage: -20°C storage, valid for 3 years, avoid repeated freezing and thawing.

Product Components:

Components	500U
rSAP(2U/μL)	250μL
10×SAP Buffer	1mL

Activity definition: 1 unit refers to the amount of enzyme required to hydrolyze 1umol of pNPP (p-Nitrophenyl Phosphate) to pNP per minute at 37°C.

Introduction:

Shrimp alkaline phosphatase catalyzes the dephosphorylation of 5' and 3' phosphate monophosphates of DNA and RNA, and also hydrolyzes ribose and deoxyribonucleoside triphosphate(NTP and dNTP). This phosphatase is widely used in molecular biology research, such as the removal of phosphate groups at the end of DNA and RNA, for subsequent cloning and probe end labeling. In cloning, the linear vector can be dephosphorylated to prevent self-linking. Shrimp alkaline phosphatase is completely and irreversibly deactivated at 65°C for 5 min. Therefore, thermal-sensitive phosphatase can be removed without ligating or end-labeling. Based on these properties, this enzyme is an excellent alternative to the traditional dephosphorylase, calf intestinal alkaline phosphatase(CIP).

Application:

1. Dephosphorylation of DNA and RNA
2. Prevent self-linking of clonal vectors
3. Prepare the 5' end-tag template

Protocols(nucleic acid terminal dephosphorylation):

DNA-5'terminal	1pmol
10×SAP Buffer	2μL
rSAP (2U/μL)	0.5μL
ddH ₂ O	Up to 20μL

Incubate at 37°C for 30min. Inactivation reaction was performed at 65°C for 5min.

Note: 1pmol of 5'terminal DNA is equivalent to 1μg of a single enzyme cut plasmid(3kb size).

This product is for research use only, do not use for human and animal treatment, clinical diagnosis, or as an additive for food, cosmetics, household products and other purposes.