



rSAP

Concentration: 1 unit/ μ l

Cat. No.: A650106
3000 Units



MADE IN DENMARK

-	rSAP 1 U/ μ l
ID No.	7200300
Cap colour	Yellow
Content	4 x 0.75 ml

Key Features

- Dephosphorylation of 5' and 3' ends of DNA and RNA
- Degradation of dNTPs prior to sequencing or SNP analysis
- Dephosphorylation prevents ligation of linearized DNA
- Dephosphorylation of DNA prior to end-labelling using T4 Polynucleotide Kinase
- Specific activity \geq 2 000 U/mg

Recombinant Shrimp Alkaline Phosphatase (rSAP) is a heat labile alkaline phosphatase purified from *Pichia pastoris*, carrying the shrimp alkaline phosphatase gene from *Pandalus borealis*. rSAP is completely and irreversibly inactivated by heating at 65°C for 5 minutes, thereby making removal of rSAP prior to ligation or end-labeling unnecessary. Optimum working range for rSAP is between pH 7-9. rSAP is active in most restriction and PCR buffers. Mg^{2+} (>1 mM) is required for activity.

Components

Ampliqon rSAP in storage buffer

- rSAP 1 unit/ μ l, 25 mM Tris-HCl, pH 7.6 at 4 °C, 5 mM $MgCl_2$, glycerol 50% (v/v)

Recommended Storage and Stability

Long term storage at -20 °C. Product expiry at -20 °C is stated on the label.

Unit Definition

One unit is defined as the amount of enzymes converting 1 μ mol of p-nitrophenyl phosphate per minute to nitrophenol and phosphate at 37°C and pH 10.4 in 0.1 M glycine buffer, 1 mM each of $ZnCl_2$ and $MgCl_2$ and 6 mM 4-nitrophenyl phosphate.

Quality Control

rSAP is tested for double stranded and single stranded endonuclease activity. Furthermore, the activity of rSAP is measured. rSAP is functionally tested (together with HL-Exol) by spiking a PCR product with dNTPs and primers followed by Sanger sequencing.

Applications

- Removal of phosphorylated ends of DNA and RNA for downstream applications such as cloning or end-labeling of probes. Dephosphorylation prevents ligation of linearized DNA. rSAP acts on 3' protruding, 5' protruding, 5' recessed and blunt ends.
- Degradation of unincorporated dNTPs in PCR reactions to prepare templates for DNA sequencing or SNP analysis.

Related Products

rSAP 1 units/μl	Cat. No.
• 750 Units	A650103
HL-Exol 20 units/μl	Cat. No.
• 1000 Units	A640103
• 5000 Units	A640107
PureIT ExoZAP PCR CleanUp Kit	Cat. No.
• 500 reactions	A630203
• 5000 reactions	A630207
PureIT ExoZAP PCR CleanUp	Cat. No.
• 500 reactions	A620603
• 5000 reactions	A620607
Taq Polymerase (500 units) *	Cat. No.
Taq DNA Polymerase 5 U/ μ l	A110003
• with 10x Ammonium Buffer	A111103
• with 5x PCR Buffer RED	A111803
Taq DNA Polymerase 5 U/ μ l, RED	A200003
• with 10x Ammonium Buffer	A201103
Taq DNA Polymerase 5 U/ μ l, glycerol free	A100003
• with 10x Ammonium Buffer	A101103
Hot Start Polymerase (500 units) *	Cat. No.
TEMPase Hot Start DNA Polymerase, 5 U/ μ l	A220003
• with 10x Ammonium Buffer	A221103
• 5x PCR Buffer RED	A221803
TEMPase Hot Start DNA Polymerase, glycerol free 5 U/ μ l	A240003
• with 10x Ammonium Buffer	A241103
<small>*Available in kits including one or two buffers (Ammonium Buffer, Standard Buffer or Combination Buffer).</small>	
Buffers for DNA polymerases *	Cat. No.
10x Ammonium Buffer, 3 x 1.5 ml	A301103
10x Standard Buffer, 3 x 1.5 ml	A302103
10x Combination Buffer, 3 x 1.5 ml	A303103
5x PCR Buffer RED, 3 x 1,5 ml **	A301803
<small>*Ammonium Buffer, Standard Buffer and Combination Buffer are also available as Mg^{2+} free buffers, detergent free buffers and Mg^{2+} and detergent free buffers. **For direct gel loading and visualisation.</small>	
Taq Master Mixes (500 x 50 μl reactions) *	Cat. No.
2x Master Mix, 1.5 mM $MgCl_2$ final concentration	A140303
2x OptiMix CLEAR, 1.5 mM $MgCl_2$ final concentration	A370503
2x Master Mix RED, 1.5 mM $MgCl_2$ final concentration	A180303
TEMPase Hot Start Master Mixes (500 x 50 μl reactions) *	Cat. No.
2x Master Mix A**, 1.5 mM $MgCl_2$ final concentration	A230303
2x Master Mix A**BLUE, 1.5 mM $MgCl_2$ final concentration	A290403
<small>*Master mixes available also in 1.1x variants as well as 2 mM $MgCl_2$ variants, **Mix A is Ammonium Buffer based, also available as Mix C based on Combination Buffer.</small>	
Special Master Mixes (500 x 50 μl reactions)	Cat. No.
Multiplex 2x Master Mix, 3 mM $MgCl_2$ final concentration	A260303
GC TEMPase 2x Master Mix I – for GC-rich templates	A331703
GC TEMPase 2x Master Mix II – for GC-rich templates	A332703
Real-time PCR Master Mixes (400 x 25 μl reactions)	Cat. No.
RealQ Plus 2x Master Mix for probe,	
• without ROX™	A313402
• with low ROX™	A314402
• with high ROX™	A315402
RealQ Plus 2x Master Mix Green	
• without ROX™	A323402
• with low ROX™	A324402
• with high ROX™	A325402

Reagents for *in vitro* laboratory use only.

Other product sizes, combinations and customized solutions are available. Please look at www.ampliqon.com or ask for our complete product list for PCR Enzymes. For customized solutions please contact us.