Steinbrenner Laborsysteme GmbH

primaAMP

Taq DNA Polymerase with 10x PCR Buffer

Article	Content
SL-9601/02-smp	200 U, 200 rxn × 20 µl
SL-9601/02-500	500 U, 500 rxn × 20 µl
SL-9601/02-2500	5 × 500 U, 2500 rxn × 20 µl
SL-9601/02-10000	20 × 500 U, 10000 rxn × 20 µl

Long-Term Storage
at -20°C in the dark

Short-Term Storage
at 4°C in the dark

DESCRIPTION

Our **primaAMP Taq DNA polymerase** is a recombinant, thermostable Taq from Thermus aquaticus. It possesses a 5' to 3' polymerase activity as well as a 5'-flap endonuclease activity.

The **primaAMP** Taq DNA polymerase can be used to amplify DNA fragments up to a length of 5 kb. Moreover, it generates A (adenine) overhangs at the 3' end, which can be used for TA-cloning.

The optimized 10x PCR buffer contains potassium chloride as well as ammonium sulfate and allows the amplification of difficult templates (e.g GC-rich).

The polymerase is available with **two different 10x PCR buffers**. The **red 10x PCR Buffer includes a DNA loading dye** and can be used to directly load the PCR sample onto agarose gels after cycling.

DID YOU KNOW?

- primaAMP is also available as a ready-to-use 2x PCR Master Mix (SL-9611/SL-9612).
- For HotStart polymerase, please order SL-9701/SL-9702.

VERSION **1.0 – 06 / 2022**

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Recommended Reaction Mixture

BEFORE YOU START

- After thawing, please **invert the component tubes 6-8 times**.
- **Do not vortex** the reaction mixture to avoid damaging the enzyme.

Component	20 µl Reaction	10 µl Reaction	Final Concentration
10x PCR Buffer (red or white)	2 µl	1 µl	1x
primaAMP Polymerase	0.2 µl	0.1 µl	1.25 U
Forward Primer	variable (e.g. 2 µl)	variable (e.g. 1 µl)	100 - 400 nM
Reverse Primer	variable (e.g. 2 µl)	variable (e.g. 1 µl)	100 - 400 nM
dNTPs (dATP, dCTP, dGTP, dTTP)	variable	variable	200 µM each
Template DNA	variable	variable	0.01 - 10 ng per reaction
Sterile Water	adjust to 20 µl	adjust to 10 µl	–

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Suggested Cycling Conditions

Step	Time	Temperature
Initial Denaturation	3 minutes	92°C - 95°C
25 - 35 cycles		
Denaturation	5 - 10 seconds	92°C - 95°C
Annealing	5 - 10 seconds	55°C - 68°C **depends on primer**
Extension	5 - 30 seconds per 1 kb amplicon length	72°C

NOTE

- The optimal annealing temperature is usually 2°C - 5°C below the primer melting temperature.
- Recommended elongation time is 5 - 30 seconds per 1 kb of amplicon length. For more complicated templates, we suggest 45 seconds for elongation.
- For maximum yield and specificity, we recommend to optimize annealing temperatures, annealing time, extension time, and the number of cycles for each template and primer pair.

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Contents

	Components	Description
SL-9601	SL-9601	Taq DNA Polymerase
	SL-9001	10x PCR Buffer, colourless
SL-9602	SL-9601	Taq DNA Polymerase
	SL-9002	10x PCR Buffer, red; ready-to-load

Further Information

For more information, please visit our website: **www.steinbrenner.de**

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Further Products

Products that may also be interesting to you

primaDIRECT PCR

- Direct-PCR without DNA extraction
- From sample to PCR in 15 minutes
- For cell culture, tissue, plants, mouse tails/ear, meat

primaPROOF HIGH-FIDELITY

- High-fidelity / proofreading PCR
- For NGS and cloning