Check the product label for actual catalog number, lot and expiry date.

ALLin™ Taq DNA Polymerase

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
PCE0101	500 u	500 u - ALLin™ Taq DNA Polymerase, 5 u/µl 4 x 1 ml - 5X ALLin™ PCR Buffer	Enzyme in storage buffer. 1X ALLin™ PCR Buffer contains 0.25 mM dNTPs, 3 mM $MgCl_2$, enhancers, stabilizers.
PCE0105	2500 u	5 x 500 u - ALLin™ Taq DNA Polymerase, 5 u/µl 20 x 1 ml - 5X ALLin™ PCR Buffer	Enzyme in storage buffer. 1X ALLin™ PCR Buffer contains 0.25 mM dNTPs, 3 mM $MgCl_2$, enhancers, stabilizers.

Storage *In the dark at -20°C.*

APPLICATIONS

- Routine PCR up to 6 kb
- Amplification of complex (GC/AT rich) templates
- Colony PCR
- Fast PCR
- TA cloning

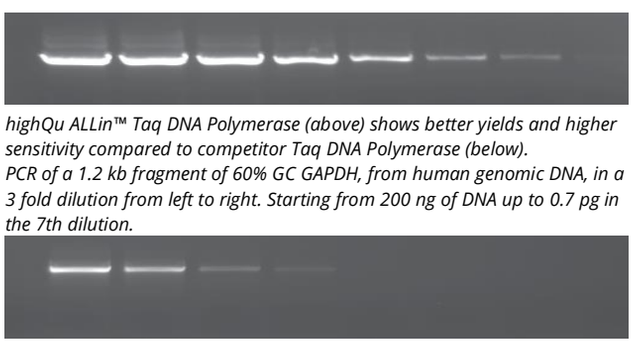
BENEFITS

- Engineered Taq combined with advanced buffer - a synergy providing advantages over classical Taq Polymerases
- Higher yields under standard and fast cycling
- Increased success in amplification of longer templates (6 kb)
- Robust amplification of GC rich templates
- 5X ALLin™ PCR Buffer contains optimal Mg^{2+} and dNTPs

PRODUCT DETAILS

highQu ALLin™ Taq DNA Polymerase is the versatile engineered enzyme which in combination with the optimized ALLin™ buffer provides higher success rates in demanding PCR applications like amplification of complex templates, crude sample PCR and fast cycling.
ALLin™ Taq DNA Polymerase has the same PCR accuracy like Taq DNA Polymerase, 4.5 x 10^4 (nucleotides incorporated before the error occurs) and produces A-tailed products suitable for ligating into TA cloning vectors.
For the maximum convenience the 2X ALLin™ Red Taq Mastermix (PCM0201) and 2X ALLin™ Taq Mastermix (PCM0101) are available.

PERFORMANCE



highQu ALLin™ Taq DNA Polymerase (above) shows better yields and higher sensitivity compared to competitor Taq DNA Polymerase (below).
PCR of a 1.2 kb fragment of 60% GC GAPDH, from human genomic DNA, in a 3 fold dilution from left to right. Starting from 200 ng of DNA up to 0.7 pg in the 7th dilution.

PROTOCOL

- Take typical measures to prevent PCR cross over contamination, keep your bench clean, wear gloves, use sterile tubes and filter pipet tips.
- Include a no-template control and positive control in parallel.
- Thaw and keep reagents on ice. Mix well before use.
- The longer the amplicon, the longer the extension time: Use 15 sec/kb extension.
- Use 90 sec extension for multiplexing.
- Run an annealing temperature gradient from 55°C to 65°C to choose the best specificity conditions.
- Do not use fast cycling for multiplexing.

IN VITRO RESEARCH USE ONLY

✓ Prepare a 50 µl reaction:

Rev. & For. Primers	0.1-0.4 µM final each (≤ 2 µl of 10 µM)
cDNA Template *or* gDNA Template	<100 ng *or* 5-500 ng
5X ALLin™ PCR Buffer	10 µl
Water (PCR Water, WAT0110)	to 49 µl
ALLin™ Taq DNA Polymerase, 5 u/µl	0.25 - 1 µl

✓ Mix gently, avoid bubbles.
✓ Place into the instrument set like:

Initial denaturation	1 cycle: 95°C - 1 min
Denaturation	40 cycles: 95°C - 15 sec
Annealing	40 cycles: 55-65°C – 15 sec
Extension	40 cycles: 72°C – 1- 90 sec (15 sec/kb)

✓ Store probes for short time on ice, for long at -20°C.

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