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

ALLin™ Hot Start Taq Polymerase

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
HSE0101	500 u	2x 250 u - ALLin™ Hot Start Taq 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.
HSE0105	2500 u	10 x 250 u - ALLin™ Hot Start Taq 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

- Sensitive hot-start PCR up to 6 kb
- Low copy target detection
- Amplification of complex (GC/AT rich) templates
- Fast PCR
- TA cloning
- Multiplex hot-start PCR

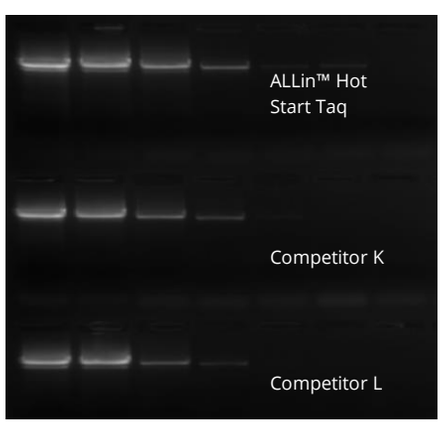
BENEFITS

- Small molecular inhibition hot-start technology combined with advanced buffer - advantages over classical hot- start Taq
- Outperforming sensitivity & specificity - low copy number target detection and no background
- 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™ Hot Start Taq Polymerase is the superior sensitive hot-start DNA polymerase. The activity at room temperature is blocked by small molecular inhibitor. Enzyme becomes active only after heating what allows for highly specific and extremely sensitive amplification, no primer dimer formation and no background.
In combination with the optimized ALLin™ buffer enzyme provides higher success rates in demanding PCR applications like amplification of complex or longer templates and fast cycling.
ALLin™ Hot Start Taq DNA Polymerase has the same PCR accuracy like Taq DNA Polymerase, and produces A-tailed products suitable for ligating into TA cloning vectors.
For the maximum convenience the 2X ALLin™ Hot Start Taq Mastermix (HSM0201) is available.

PERFORMANCE



highQu ALLin™ Hot Start Taq DNA Polymerase shows better yields and higher sensitivity compared to competitors.

PCR of a 0.4 kb fragment, from human genomic DNA, under fast cycling conditions. Starting template 100 ng with further 10 fold dilutions.

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.

✓ 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™ Hot Start 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 – 1-2 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.

IN VITRO RESEARCH USE ONLY

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