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

ALLin™ RPH Polymerase

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
HLE0101	250 u	250 u - ALLin™ RPH Polymerase, 5 u/µl 2 x 1 ml - 5X ALLin™ RPH Buffer	Enzyme in storage buffer. 1X ALLin™ RPH Buffer contains 0.25 mM dNTPs, 3 mM $MgCl_2$, enhancers, stabilizers.
HLE0105	1250 u	5 x 250 u - ALLin™ RPH Polymerase, 5 u/µl 10 x 1 ml - 5X ALLin™ RPH Buffer	Enzyme in storage buffer. 1X ALLin™ RPH Buffer contains 0.25 mM dNTPs, 3 mM $MgCl_2$, enhancers, stabilizers.

Storage *In the dark at -20°C.*

APPLICATIONS

- Amplification of difficult & complex (GC/AT rich) templates
- Long PCR (up to 35 kb) with higher fidelity
- Colony & crude sample PCR
- Multiplex PCR
- TA cloning

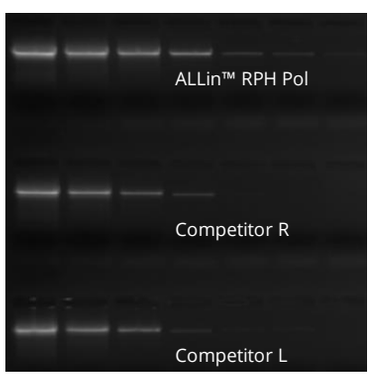
BENEFITS

- RPH – Robust, Proofreading, Hot-start Polymerase
- Low-copy number target detection ensured by small molecular inhibitor hot-start
- Long (up to 35 kb) high-fidelity (5X higher than Taq) amplification ensured by proofreading activity
- High yields under standard and fast cycling
- Robust amplification of GC or AT rich templates, crude samples
- 5X ALLin™ PCR Buffer contains optimal Mg^{2+} and dNTPs

PRODUCT DETAILS

highQu ALLin™ RPH Polymerase (Robust, Proofreading, Hot-start Polymerase) is the versatile engineered enzyme combining best polymerase properties for excellence in most demanding PCR applications, like low copy detection, long or high fidelity PCR, amplification of complex templates, crude sample PCR and multiplexing.
ALLin™ RPH Polymerase has 5 times higher fidelity than Taq DNA Polymerase and produces A-tailed products suitable for ligating into TA cloning vectors.
For the maximum convenience the 2X ALLin™ RPH Polymerase mastermix (HLM0101) is available.

PERFORMANCE



ALLin™ RPH Polymerase ensures higest sensitivity amplification of 25 kb target from lowest amounts of human genomic DNA. The starting template concentration is 200 ng of human genomic DNA with 2x further dilutions. 25kb fragment of the p53 gene was amplified.

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 for amplicons of <5 kb.
- Use 40-60 sec/kb extension for amplicons of 5-35 kb.
- 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™ RPH Buffer	10 µl
Water (PCR Water WAT0110)	to 49 µl
ALLin™ RPH 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	25-35 cycles: 95°C - 15 sec
Annealing	25-35 cycles: 55-65°C – 15 sec
Extension	25-35 cycles: 72°C – 10 min

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

IN VITRO RESEARCH USE ONLY

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