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

ALLin™ HiFi DNA Polymerase

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
HLE0201	200 u	200 u - ALLin™ HiFi DNA Polymerase, 2 u/µl 3 x 1 ml - 5X ALLin™ HiFi Buffer	Enzyme in storage buffer. 1X ALLin™ HiFi Buffer contains 0.25 mM dNTPs, 3 mM $MgCl_2$, enhancers, stabilizers.
HLE0205	1000 u	5 x 200 u - ALLin™ HiFi DNA Polymerase, 2 u/µl 15 x 1 ml - 5X ALLin™ HiFi Buffer	Enzyme in storage buffer. 1X ALLin™ HiFi Buffer contains 0.25 mM dNTPs, 3 mM $MgCl_2$, enhancers, stabilizers.

Storage *In the dark at -20°C.*

APPLICATIONS

- High-fidelity PCR up to 10 kb
- Long PCR up to 10 kb
- Amplification of complex (GC/AT rich) templates
- Fast high-fidelity PCR
- Blunt cloning
- Crude sample PCR with high fidelity

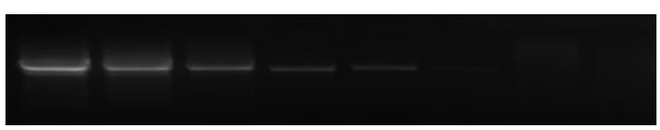
BENEFITS

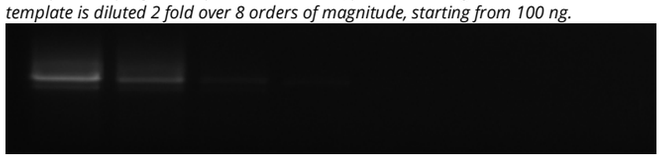
- Engineered proofreading enzyme(Pfu-based) and advanced buffer - a synergy providing advantages over classical high-fidelity polymerases
- 50 x higher fidelity than classic Taq
- Increased sensitivity and high yields under standard and fast cycling
- Increased success in PCR of longer templates (10 kb)
- Robust on GC rich templates, crude samples
- 5X ALLin™ PCR Buffer contains optimal Mg^{2+} and dNTPs

PRODUCT DETAILS

highQu ALLin™ HiFi DNA Polymerase is the outperforming high-fidelity enzyme derived from Pfu polymerase by introducing several point mutations. The robust engineered enzyme in combination with the optimized ALLin™ buffer provides higher fidelity (50X higher than Taq), better performance, increased success in demanding applications like amplification of complex or longer templates, crude samples and fast cycling.
ALLin™ HiFi DNA Polymerase produces blunt-ended products suitable for ligating into blunt vectors. However, to increase ligation efficiency, the use of HighEnd™ Repair Kit (HER0101) is recommended for final polishing and phosphorylation of PCR fragment ends.

PERFORMANCE





highQu ALLin™ HiFi DNA Polymerase (above) shows better yields and higher sensitivity compared to P enzyme from competitor N (below).
PCR of a 1 kb fragment of 60% GC GAPDH, from human genomic DNA. The template is diluted 2 fold over 8 orders of magnitude, starting from 100 ng.

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: 30 sec/kb.
- Run an annealing temperature gradient from 55°C to 65°C to choose the best specificity conditions.

✓ 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 5-500 ng	*or*
5X ALLin™ HiFi Buffer	10 µl	
Water (PCR Water WAT0110)	to 49 µl	
ALLin™ HiFi DNA Polymerase, 2 u/µl	0.5 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 –30 sec (30 sec/kb)

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

IN VITRO RESEARCH USE ONLY

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