ELISABETH PHARMACON Ltd.
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EliZyme™ HS HIFI MIX

Intended use:

For Research Use Only. Not for use in diagnostic procedures.

Storage:

Upon arrival store components at -20 °C. Avoid prolonged exposure to light. When stored under these conditions, the kit will retain full activity until the expiration date indicated on the kit label. Reagents may be stored at 4 °C up to 1 month.

Product description

EliZyme™ HS HIFI MIX has been engineered to exhibit a greater affinity for DNA, eliminating the need for accessory proteins or DNA binding domains. This enzyme possesses a natural high processivity, leading to notable enhancements in yield, speed, and sensitivity. It demonstrates improved capabilities in amplifying long DNA fragments, as well as targets with high GC- or AT-richness. To prevent non-specific amplification during the setup of the reaction, enhance sensitivity, and improve reaction efficiency, the enzyme is combined with a proprietary antibody that deactivates it until the initial denaturation step. EliZyme™ HS HIFI MIX is supplied in a convenient 2X concentrated format. The 2X EliZyme™ HS HIFI MIX comprises HotStart DNA Polymerase, dNTPs, $MgCl_2$, and stabilizers. The EliZyme™ HS HIFI MIX is specifically designed for routine, high-fidelity PCR of various targets and fragment sizes. It offers error rates that are approximately 100 times lower than those of the standard Taq DNA polymerase.

EliZyme™ HS HIFI polymerase exhibits 5'-3' polymerase activity and 3'-5' exonuclease (proofreading) activity, but lacks 5'-3' exonuclease activity. The strong 3'-5' exonuclease activity contributes to extremely accurate DNA amplification. The error rate of EliZyme™ HS HIFI polymerase is 1 error per 3.6 x 10^6 nucleotides incorporated. DNA fragments produced using the EliZyme™ HS HIFI MIX are suitable for routine downstream analysis and applications, such as restriction enzyme digestion, cloning, and sequencing. PCR products have blunt ends.

Content

	Ref. No.	Content	Size
EliZyme™ HS HIFI MIX	EZ2501	1x1.25 ml	100 rxns
	EZ2505	1x6.25 ml	500 rxns
	EZ2510	2x6.25 ml	1000 rxns

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Primers

Primers should have a predicted melting temperature of around 65 °C. Primers should be designed to eliminate the possibility of primer-dimer formation and non-specific amplification. The final primer concentration in the reaction should be between 0.2 µM and 0.6 µM.

Reaction setup

After thawing, briefly vortex the mix and shortly spin.

Reagent	25 µl reaction	Final conc.
2x EliZyme™ HS HIFI MIX	12.5 µl	1x
Forward primer (10 µM)	0.75 µl	300 nM
Reverse primer (10 µM)	0.75 µl	300 nM
Template DNA	< 100 ng genomic DNA, < 10 ng cDNA	Variable
PCR grade water	Up to 25 µl	

PCR cycling profile

Step	Temperature	Time	Cycles
Initial denaturation	95 °C	1 – 3 min	1
Denaturation	98 °C	20 s	25 – 35*
Annealing	60 – 75 °C	15 s	
Extension	72 °C	15 – 60 s**	
Final extension	72 °C	1 min/kb***	1

*For highest fidelity is possible to use less than 25 cycles.
**For fragments longer than 1 kb use up to 60 s/kb.
***Optional.

Manufacturer:

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Catalog number

Batch code


Use by (last day of month)


Upper limit of temperature


Manufacturer

Contains sufficient "N" tests