



## 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<sub>2</sub>, 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<sup>6</sup> 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



## 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:

**ELISABETH PHARMACON, spol. s r. o.**

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Catalog number



Batch code



Use by (last day of month)



Upper limit of temperature



Manufacturer



Contains sufficient "N" tests