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CesiumTaq-LA

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For technical support or to place an order:

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Datasheet

CesiumTaq-LA DNA Polymerase

Amount: 100 μ l (10 units/ μ l or 1000 reactions) per tube

Shipping conditions: Ambient temperature

Storage conditions: -20°C for enzyme, 4°C for 10x CesiumTaq buffer

Thermo stability: Retains at least 85% activity after 1 hour at 95°C

Shelf life: At least 1 year from date of receipt under proper storage conditions.

PRODUCT DESCRIPTION

CesiumTaq-LA Polymerase is a double cold-sensitive mutant of Taq polymerase. Due to its suppressed activity at low temperatures this enzyme is designed for hot start PCR performance.

A TYPICAL PCR PROTOCOL for a 50 μ l reaction

Reagent	Volume	Final Concentration
10x CesiumTaq PCR buffer	5 μ l	2.5 mM MgCl ₂
dNTP mix (10 mM)	1 μ l	200 μ M each
Left Primer	variable	0.2 μ M
Right Primer	variable	0.2 μ M
DNA template [†]	variable	0.1-100ng
Betaine 5M [‡]	13 μ l (optional)	1.3 M
CesiumTaq-LA Polymerase [*]	0.1 μ l	1 unit
de-ionized distilled H ₂ O	Adjust final volume to 50 μ l	-

CesiumTaq PCR buffer contains 25mM MgCl₂.

[†] DNA amount depends mostly on genome size and target gene copy number.

[‡] Betaine is a general PCR enhancer. It usually improves the yield and specificity of amplification especially for longer targets.

^{*} **To determine specific optimal enzyme concentration, we strongly recommend an enzyme titration test for each target. Targets larger than 1kb may require more enzyme.**

CYCLING CONDITIONS

1. Denaturation: 94° for 2 minutes for 1 cycle
2. Denaturation: 94° for 30-45 seconds
3. Annealing: 50°-68° depending on the specific primers' T_m for 40-60 seconds
4. Extension: 72° for at least 1 min
5. Repeat steps 2-4 for 25-40 cycles

REFERENCES

Kermekchiev, M.B., et al. (2003) Cold-sensitive mutants of Taq DNA polymerase provide a hot start for PCR. Nucl Acids Res. 31, 6139-6147.

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