

CesiumTaq LA

Cat #: 210



Amount: 25 μ l (0.05 μ l/25 μ l reaction)

Shipping conditions: Ambient temperature

Storage conditions: -20°C F, 4°C for 10x Taq Mutant Reaction Buffer

Thermostability: 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 is a DNA polymerase mixture containing CesiumTaq, a double cold-sensitive mutant of Taq DNA polymerase. Due to its suppressed activity at low temperatures this enzyme is designed for hot-start PCR performance. The Long-Accurate feature allows for amplification of longer products with higher fidelity and accuracy. LA enzymes are not recommended for use with dUTP. 10x buffer composition is: 500 mM Tris-Cl pH 8.3, 160 mM ammonium sulfate, 0.25% Brij 58, and 25 mM magnesium chloride.

TYPICAL PCR PROTOCOL for a 25 μ l reaction:

Reagent	Volume	Final Concentration
10x Taq Mutant Reaction Buffer	2.5 μ l	1x
dNTP mix (10 mM each)	0.5 μ l	200 μ M each
Left Primer	variable	200 nM
Right Primer	variable	200 nM
DNA template†	variable	0.1-100 ng
Betaine 5M*	6.5 μ l	1.3M
CesiumTaq LA**	0.05	1 unit
De-ionized distilled H ₂ O	Adjust final volume to 25 μ l	

† 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 1 kb may require more enzyme.

CYCLING CONDITIONS:

1. Denaturing: 94° for 2-8 minutes for 1 cycle
2. Denaturing: 94° for 40-60 seconds
3. Annealing: 50°-68° depending on the specific T_m primers for 40-60 seconds
4. Extension: 68° for 2 min/kb target
5. Repeat steps 2-4 for 25-40 cycles

Please visit us on the web at www.klentaq.com for troubleshooting and detailed protocols.

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.

Notice to Purchaser: DNA Polymerase Technology products may not be resold, modified for resale or used to manufacture products without an agreement with DNA Polymerase Technology, Inc. The Omni mutant DNA Polymerases are trademarked and patented (US 7,462,475, and US patent pending). No license for CesiumTaq LA, to be used in a Polymerase Chain Reaction, has been purchased by DNA Polymerase Technology, Inc.