



Lyoph-Ready Omni Klentaq Cat #: GF340

Amount: 1000 x 25 µl reactions (equivalent to 250 µl standard Omni Klentaq. Volume may be up to 2.5x higher)

Shipping conditions: Ice Pack

Storage conditions: 4°C for 4 months or for long-term storage, -20C for 12 months with up to 10 freeze/thaw cycles

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

Expiration: On tube label

PRODUCT DESCRIPTION:

A reduced glycerol preparation of Omni Klentaq, a multipurpose mutant of Klentaq able to overcome inhibitors in blood, serum, soil, inhibitory foods, and fluorescent dyes. Omni Klentaq can tolerate 15 - 20% whole blood or serum in the PCR reaction. 10x buffer composition is: 500 mM Tris-Cl pH 9.2, 160 mM ammonium sulfate, 0.25% Brij 58, and 35 mM magnesium chloride.

TYPICAL PCR PROTOCOL for a 25 µl reaction:

Reagent	Volume	Final Concentration
10x Klentaq Mutant Reaction Buffer	2.5 µl	1x
dNTP mix (10 mM each)	0.5 µl	200 µM each
Left Primer	variable	200 nM
Right Primer	variable	200 nM
DNA template†	variable	0.1-100 ng
PCR Enhancer Cocktail (recommended)*	12.5 µl	1x
Omni Klentaq	0.05 – 0.25 µl **	
De-ionized distilled H2O	Adjust final volume to 25 µl	

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

* For optimal performance, we recommend using one of our PCR Enhancer Cocktails (PEC-1, PEC-1GC, PEC-2, or PEC-2-GC) which are specially formulated for use with whole blood, serum or plasma or 1.3 M Betaine, a general PCR enhancer.

** To determine specific optimal enzyme concentration, we strongly recommend an enzyme titration test for each target. A good starting amount of the enzyme per 25 ul reaction is 0.05 ul for purified DNA templates and 0.25 ul for crude samples containing 5-10% whole blood, plasma or serum. Targets larger than 1 kb may require more enzyme or may benefit from the use of the LA (Long Accurate) version of the polymerase.

Note: Enzyme amount per reaction should be adjusted based on final enzyme concentration.

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

Initial 2-8 min heating step is recommended for crude samples containing 5-10% whole blood, plasma or serum.

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

REFERENCE:

Kermekchiev, M.B. et al. (2009) Mutants of Taq DNA polymerase resistant to PCR inhibitors allow DNA amplification from whole blood and crude soil samples. Nucl. Acids Res., 37 (5):e40 E pub.