

## Enzyme Combo Cat #: 500

**Amount:** Klentaq1: 20 ul (0.05 ul/ 25 ul rxn)  
Klentaq LA: 20 ul (0.05 ul per kb but no more than 0.325 ul/ 25 ul rxn)  
OmniTaq: 25 ul (0.05- 0.5ul/ 25 ul rxn)  
Omni Klentaq: 25 ul (0.05- 0.5ul/ 25 ul rxn)  
Cesium Klentaq AC: 5 ul (0.05 ul/ 25 ul rxn)  
CesiumTaq: 5 ul (0.05 ul/ 25 ul rxn)

Provided with Klentaq Reaction Buffer (1.5 ml) for use with Klentaq, Omni Klentaq, and Cesium Klentaq AC and Taq Mutant Reaction Buffer (1.5 ml) for use with OmniTaq and CesiumTaq

**Shipping conditions:** Ambient temperature

**Storage conditions:** -20°C for enzymes, 4°C for Reaction Buffers

**Thermostability:** Enzymes 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:

Our Enzyme Combo allows scientists to sample six different enzymes to determine which one is right for their application. The 10x Klentaq reaction buffer composition is: 500 mM Tris-Cl pH 9.2, 160 mM ammonium sulfate, 0.25% Brij 58, and 35 mM magnesium chloride. The 10x Taq Mutant Reaction Buffer is: 500 mM Tris-Cl pH 8.3, 160 mM ammonium sulfate, 0.25% Brij 58, and 25 mM magnesium chloride. We also offer (upon request) 10x reaction buffers at pH 7.9 for better fidelity.

### TYPICAL PCR PROTOCOL for a 25µl reaction:

Reagent	Volume	Final Concentration
10x appropriate 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 <sup>†</sup>	variable	0.1-100 ng
PCR Enhancer Cocktail (recommended for use with Omni enzymes)*	12.5 µl	1x
Omni Klentaq	0.1 – 0.25 µl **	
De-ionized distilled H <sub>2</sub> O	Adjust final volume to 25µl	-

<sup>†</sup> DNA amount depends mostly on genome size and target gene copy number.

\* Our PCR Enhancer Cocktails (sold separately) confer additional inhibition resistance when using whole blood, serum, plasma, soil, and some inhibitory foods.

\*\* To determine specific optimal enzyme concentration, we strongly recommend an enzyme titration test for each target. Optimal concentrations start at 0.05 ul / 25 ul rxn when using purified DNA template. Our Omni enzymes require more enzyme (up to 0.5 µl / 25 ul rxn) for use with crude samples containing 5% or more whole blood, plasma or serum, or crude soil extracts, or food matrices. For all our enzymes, targets larger than 1 kb require more enzyme and will benefit from a Long Accurate (LA) version of the enzyme.

### CYCLING CONDITIONS:

1. Denaturing: 94° for 2-10 minutes for 1 cycle \*
2. Denaturing: 94° for 40-60 seconds
3. Annealing: 50°-68° depending on the specific T<sub>m</sub> primers for 40-60 seconds
4. Extension: 68° for 2 min / 1kb target
5. Repeat steps 2-4 for 25-40 cycles

An initial 2 min heating step is recommended for purified DNA samples, and 5-10 min for crude samples containing whole blood, plasma, serum, soil, inhibitory foods, or other PCR inhibitors.

**Please visit us on the web at [www.klentaq.com](http://www.klentaq.com) for troubleshooting and detailed protocols.**

### 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 Omni Klentaq, to be used in a Polymerase Chain Reaction, has been purchased by DNA Polymerase Technology, Inc.