

5x Klentaq1 PCR Kit

Cat #: 120



Amount: 125 μ l enzyme
2 x 1.25 ml tubes of 5X KT-PCR Mix
(sufficient for 500 x 25 μ l reactions)

Shipping conditions: Ice Pack

Storage conditions: For best performance, store at -20°C

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

Shelf life: At least 1 year if stored at -20°C and 10 freeze/thaws or at least 1 month if stored at 4°C.

PRODUCT DESCRIPTION:

Our PCR kit contains 5X concentrated master mix (5X KT-PCR Mix) lacking only the Klentaq1 enzyme. The enzyme is provided in a separate vial, which allows an adjustment of its final concentration in PCR.

Our 5x ready-to-use PCR kit contains Klentaq1, a 5'-exonuclease deficient Taq polymerase with improved fidelity and thermostability. This kit can be used for conventional as well as real-time PCR. For real-time applications you may need to add a fluorescent dye as an alternative to probes. 5X KT-PCR Mix composition is: 250 mM Tris-Cl pH 9.2, 80 mM ammonium sulfate, 0.25% Brij 58, 17.5 mM Magnesium Chloride, and 1 mM each dNTP.

TYPICAL PCR PROTOCOL for a 25 μ l reaction:

Reagent	Volume	Final Concentration
5X KT-PCR Mix	5 μ l	1x
Left Primer	variable	200 nM
Right Primer	variable	200 nM
DNA template†	variable	0.1-100 ng
PCR Enhancer Cocktail (recommended)*	12.5 μ l	1x
Klentaq1	0.05 – 0.25 μ l **	
De-ionized distilled H2O	Adjust final volume to 25 μ l	

† 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) 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. Good starting amount of the enzyme per 25 μ l reaction is 0.05 μ l. Targets larger than 1 kb may require more enzyme or may benefit from the LA (Long-Accurate) version of the enzyme

CYCLING CONDITIONS:

1. Denaturing: 94° for 2 minutes for 1 cycle
2. Denaturing: 94° for 40-60 seconds
3. Annealing: 50°-68° depending on the specific primers (5° less than Tm) 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:

Barnes, W.M. (1994) PCR amplification of up to 35 kb DNA with high fidelity and high yield from bacteriophage templates, PNAS 91, 2216-2220.