Print only pages 2 for Customers

Product Information Sheet

Product Name: AlloyTaq™ Polymerase, High Fidelity with 10X Reaction Buffer*

Concentration: AlloyTaq Polymerase, High Fidelity: 5U/µl, AlloyTaq Reaction Buffer: 10X
Storage and Handling: Upon arrival store at -20°C for provided expiration date
Ordering Information:

Item Number	Units	Number of Tubes and Volumes
AT-HF-RB-500	500	AlloyTaq Polymerase, High Fidelity 500 Units: 1x100µL, 10X AlloyTaq Reaction Buffer: 2x1mL
AT-HF-RB-1000	1000	AlloyTaq Polymerase, High Fidelity 500 Units: 2x100µL, 10X AlloyTaq Reaction Buffer: 4x1mL

Product Description:

AlloyTaq™ Polymerase is an optimized blend of Taq and Integrity High Fidelity Polymerases™ from species pyrococcus GBD. With the 3'-5' proofreading ability of Integrity and the robust amplification of Taq, AlloyTaq™ is not only great for routine PCR, but also high fidelity and longer and more difficult amplicons. This composition increases fidelity of Taq by greater than two-fold. AlloyTaq™ Polymerase will produce blunt ended overhang products at the 3' end.

10X AlloyTaq™ Reaction Buffer:

Specially optimized reaction buffer specifically manufactured for AlloyTaq™ Polymerase, High Fidelity. This Buffer is supplied in a 10X concentration and should be diluted for use.

Protocol: Minimize Freeze thaw of master mix to avoid loss of performance. The following reaction set up and general cycling conditions are recommended but can vary depending on the template and primers being used.
Reaction set-up for a 50uL Reaction:

Component	Volume	Final Concentration
10X AlloyTaq™ Reaction Buffer	5 µl	1X
Upstream Primer, 10 µM	0.5-5.0 µl	0.1-1.0µM
Downstream Primer, 10 µM	0.5-5.0 µl	0.1-1.0µM
dNTP, 10mM	1-2.5 µl	200-500µM
DNA Template	X µl	> 1ng
AlloyTaq™ Polymerase	0.25-1uL	1.25U-5U
Nuclease Free Water	to 50 µl	N.A.

Thermal cycling conditions: The following general cycling conditions are recommended but can vary depending on the template and primers being used.

Cycling Step	Temperature	Holding Time	Cycles
Initial Denaturation	95°C	2min	1
Denaturation	98°C	10sec	20-30
Annealing#	68°C	60sec	
Extension	70°C	(1min/kb)	
Final Extension	72°C	10min	1

#Annealing will depend on primer length and composition. Generally, begin 5°C below primer T_m.

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