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Unmodified Taq-*FORCE*™ DNA Polymerase

Product No.:	BTAQ0500		BTAQ2500
System Includes:		*System Includes:*	
1 x 500 U	Unmodified Taq-*FORCE*™ DNA Polymerase (5 U/µl)	5 x 500 U	Unmodified Taq-*FORCE*™ DNA Polymerase (5 U/µl)
1 x 1.2 ml	10X NH_4 Reaction Buffer	5 x 1.2 ml	10X NH_4 Reaction Buffer
1 x 1.2 ml	$MgCl_2$	5 x 1.2 ml	$MgCl_2$

Unmodified Taq-*FORCE*™ DNA Polymerase (High Concentration)

Product No.:	BTAQ0250H
System Includes:	
5 x 500 U	Unmodified Taq-*FORCE*™ DNA Polymerase (15 U/µl)
5 x 1.2 ml	10X NH_4 Reaction Buffer
5 x 1.2 ml	$MgCl_2$

Unmodified Taq-*FORCE*™ DNA Polymerase is the native enzyme isolated from *Thermus aquaticus* YT-1 as described (Kaledin, A.S., et al. (1980) Biokhimiia 45:644-651). Unmodified Taq-*FORCE*™ DNA polymerase produces products that have an A overhang, and are suitable for cloning into T-vectors.

Unit Definition: One unit is the amount of enzyme that will incorporate 10 nmoles of dNTPs into an acid-insoluble form in 30 minutes at 72°C under the following assay conditions: 25 mM TAPS, pH 9.3 (25°C); 50 mM KCl; 2 mM $MgCl_2$; 0.2 mM each dATP, dGTP, dTTP and 0.1 mM radiolabeled dCTP; 0.25 mg/ml activated salmon sperm DNA; 1 mM ß-mercaptoethanol.

Storage Buffer: Enzyme is supplied in 20 mM Tris-HCl (pH 7.5), 100 mM NaCl, 0.1 mM EDTA, 2 mM DTT, 50% glycerol, 0.1% Tween-20.

Storage Conditions: -20°C. *DO NOT STORE IN A FROST-FREE FREEZER*.

Quality Control: Endonuclease, nickase, or exonuclease activities were not detected after 8 hours incubation, respectively, of 1 µg each of lambda, pBR322, or *Hin*d III - digested lambda DNA at 72ºC in the presence of 5 units of Unmodified Taq-*FORCE*™ DNA Polymerase.

10X NH_4 Reaction Buffer: 160 mM $(NH_4)_2SO_4$, 670 mM Tris-HCl (pH 8.8 at 25ºC), 0.1% Tween-20.

Mg++ Stock Solution: 50 mM $MgCl_2$

Reaction Conditions: The optimal conditions (incubation time, temperatures, concentration of enzyme, template DNA, primers, $MgCl_2$) depend on the system and must be determined individually. IMPORTANT: Spin vials briefly before use.

Component	Volume	Final Concentration
10X NH_4 Reaction Buffer	5 µl	1X
DNTPs Pre-Mixed *(Cat. #DNTP10)*	4 µl	0.2 mM
$MgCl_2$	variable	0.5 – 4 mM
Primer	variable	0.1 – 1.0 µM (each)
Unmodified Taq-*FORCE*™ DNA Polymerase	variable	0.01 – 0.05 U/µl
Template DNA	variable	variable
Sterile H_2O	variable	----------
Final Volume	50 µl	----------

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