PUREBIOTECH LLC
752A Lincoln Blvd.
Middlesex, NJ 08846

Toll Free: 866-252-7771
Phone: 732-469-7771 Fax: 732-469-7782
Web: www.purebiotechllc.com

Taq-*FORCE*™ Red DNA Polymerase

Product No.:	RTAQ0500		RTAQ2500
System Includes:		*System Includes:*	
1 x 500 U	Taq-*FORCE*™ Red DNA Polymerase (1 U/µl)	5 x 500 U	Taq-*FORCE*™ Red DNA Polymerase (1 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	$MgCl_2$

Taq-*FORCE*™ Red is a formulation of native Taq that contains an inert red dye which allows users to check which tubes have polymerase added and facilitates verification of adequate mixing. Samples are loaded directly onto gels since reactions sink to the bottom of gel wells unassisted. The red dye migrates in the same direction as DNA. At least 1.5 units must be used per 50 µl reaction to ensure adequate density for gel loading. Taq-*FORCE*™ Red 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 â-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, inert dye.

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

Quality Control: Endonuclease, nickase, or exonuclease activities were not detectable 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 Taq-*FORCE*™ Red 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 $MgCl_2$ (suggested final concentration 0.5 mM- 4 mM).

Reaction Conditions: The optimal conditions (incubation time, temperatures, conc. of enzyme, template DNA, primers, $MgCl_2$) depend on the system and must be determined empirically. *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)
Taq-*FORCE*™ Red DNA Polymerase	≥ 1.5 µl	≥ 0.03 U/µl
Template DNA	variable	variable
Sterile H_2O	variable	----------
Final Volume	50 µl	----------

FOR RESEARCH USE ONLY