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Taq-*FORCE*™ Amplification System

Product No.:	STAQ0250		STAQ1000
System Includes:		*System Includes:*	
1 x 250 U	Unmodified Taq-*FORCE*™ DNA Polymerase (5 U/µl)	4 x 250 U	Unmodified Taq-*FORCE*™ DNA Polymerase (5 U/µl)
1 x 1 ml	MIGHTY™ Buffer	4 x 1 ml	MIGHTY™ Buffer
1 x 400 µl	DNTPs Pre-Mixed *(Cat. # DNTP10)*	4 x 400 µl	DNTPs Pre-Mixed *(Cat. # DNTP10)*

Taq-*FORCE*™ Amplification System (High Concentration)

Product No.:	STAQ050H		STAQ200H
System Includes:		*System Includes:*	
1 x 500 U	Unmodified Taq-*FORCE*™ DNA Polymerase (15 U/µl)	4 x 500 U	Unmodified Taq-*FORCE*™ DNA Polymerase (15 U/µl)
1 x 1 ml	MIGHTY™ Buffer	4 x 1 ml	MIGHTY™ Buffer
1 x 400 µl	DNTPs Pre-Mixed *(Cat. # DNTP10)*	4 x 400 µl	DNTPs Pre-Mixed *(Cat. # DNTP10)*

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).

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: 20 mM Tris-HCl, pH 7.5; 100 mM NaCl; 0.1 mM EDTA; 2 mM DTT; 50% (v/v) glycerol; 0.1% Tween -20.

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

Quality Control Assay: 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 U of unmodified Taq-*FORCE*™ DNA polymerase. Amplification of the 371 bp fragment of mouse p53 cDNA was detected from 10 copies of template with the Taq-*FORCE*™ Amplification System (2.5 U enzyme, 0.4 µM each primer, 35 cycles).

MIGHTY™ Buffer is a 10X Reaction Buffer complete with $MgCl_2$ to give a final concentration of 1.5 mM. Unique enhancers, included in the buffer, allow for efficient amplification of difficult templates, and in reactions performed in glass capillaries, on glass slides, and on MPG® or CPG particles. (Available for individual sale – Product No.: MB0250 2 x 1 ml)

dNTP Mix is a 10 mM solution containing 2.5 mM each: dATP; dCTP; dGTP; dTTP.

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

Component	Volume	Final Concentration
10X MIGHTY™ Buffer	5 µl	1X
DNTPs Pre-Mixed (10 mM)	4 µl	0.2 mM
Primer	variable	0.1 – 1.0 µM (each)
Unmodified Taq-*FORCE*™ DNA Polymerase (5 U/µl); (15 U/µl)	0.5 µl; variable	0.05 U/µl; variable
Template DNA	variable	Variable
Sterile H_2O	variable	----------
Final Volume	50 µl	----------

FOR RESEARCH USE ONLY