Blend Taq-Plus-

Code No. BTQ-20*

Lot No. ******

Storage Store at -20°C

Size 50units(201T), 250units(201)

Concentration	:	Blend Taq-Plus-	2.5	units/μl
		anti-Taq DNA polymerase antibody	0.5	μg/μl
Unit Definition	:	One unit of enzyme is defined as the amount of enzyme that will incorporate 10 nmoles of dNTPs into acid insoluble material in 30 minutes at 75°C.		
Assay Condition	:	25	mM	TAPS(pH9.3)
		50	mM	KCl
		10	mM	$MgCl_2$
		200	μM	each of dATP,dGTP,dTTP
		100	μM	[α-^{32}P]-dCTP
		20	μg	activated salmon sperm DNA per 50 μl reaction
Storage Buffer	:	20	mM	Tris-HCl(pH8.0)
		100	mM	KCl
		0.1	mM	EDTA
		1	mM	DTT
		0.5	%	Tween-20
		0.5	%	Nonidet P-40
		50	%	Glycerol
Materials Provided	:	10×Buffer for Blend Taq (Mg^{2+}concentration: 20mM)		
	:	dNTPs : 2mM dATP,dGTP,dCTP,dTTP each		

Quality Control

1. PCR Assay : The 17.5kbp fragment of human β globin gene could be amplified using human genomic DNA.

Purchase of this product is accompanied by a limited license to use it in the Polymerase Chain Reaction(PCR) process for Research Field in conjunction with a thermal cycler whose use in the automated performance of the PCR process is covered by the up-front license fee, either by payment to Perkin-Elmer or as purchased, i. e., an authorized thermal cycler.

PCR conditions

Reaction mixture for General PCR Amplification

10×Buffer for Blend Taq	5μl
Blend Taq	1.25U/reaction
Template	1-50ng (plasmid) 10-1000ng (Genome)
primer	10-50pmoles
dNTPs	0.2mM (final conc.)
total volume	50μl

Suggested Cycling parameters

Segment	Target			Number of Cycles
	<1kb	1kb - 6kb	>6kb	
1	94℃ 2min			1
2 Denaturation	94℃ 30sec (see notes #1)			30
3 Annealing	Primer Tm-5℃ (55-60℃) 30sec		68℃ 1min/kb PCR target (see notes #2, #3)	
4 Extension	72℃ 1min	72℃ 1min/kb PCR target		

Notes

1. The denaturation time and temperature may require optimization. Typically denaturation time will range 25 -30sec at 94℃ or 5 - 10sec at 98℃.
2. Toyobo suggests >70℃ melting temperature of primer (Tm) for long target (>6kb).
3. A dNTP concentration range of 0.3 - 0.4mM total is recommended for longer target (>10kb).
4. Blend Taq produces amplification products that are ready to clone directly into TA cloning vectors without any special optimization. To get sufficient numbers of transformants and white colony, longer ligation time will be efficient, recommended 2 hours - overnight for the amplification products of >1kb.
5. Blend Taq-Plus- is designed to be suitable for Hot Start PCR. Non-specific amplification due to mispriming and/or formation of primer dimer before thermal cycling can be prevented