

-20 2

Optimus™ Hotstart Taq DNA

5 kb 2min/kb 70-75
20s/kb 5' → 3' 3' → 5'
3'-dA Optimus™ Hotstart Taq DNA DNA

3

	250U	1,000U	3,000U	18,000U
Optimus™ Hotstart Taq DNA	50 µl	200 µl	200 µl × 3	100 µl × 36
5U/µl				
10× Hotstart Buffer Mg ²⁺ Plus ^[1]	1.25 ml	1.25 ml × 2	1.25 ml × 6	1.25 ml × 36
6× Loading Buffer ^[2]	1 ml	1 ml	1 ml	-

[1] 10× Hotstart Buffer Mg²⁺ Plus Mg²⁺ Free Mg²⁺ Plus

Mg²⁺ Free 10× Hotstart Buffer 25 mM MgCl₂

[2] P1044 6× Loading Buffer Cat. # M9041

dNTPs Cat. # P9011/P9012/P9013

U DNA / 72 30 min
10 nmol

PCR DNA

		(50 µl reaction volume)	(50 µl reaction volume)
1	10× Hotstart Buffer Mg ²⁺ Plus	5 µl	1×
2	dNTPs 2.5mM	4 µl	0.4 mM
3	upstream primer (10 µM) ^[1]	2 µl	0.4 µM
4	downstream primer (10 µM) ^[1]	2 µl	0.4 µM
5	Optimus™ Hotstart Taq DNA 5U/µl ^[2]	0.5-1 µl	2.5-5U
6	template DNA ^[3]	1-4 µl	<1 µg
7	^[4]	To 50 µl	-
optional	MgCl ₂ (MgSO ₄)/PCR Enhancer ^[5]	Variable	-

[1] 0.1-1 µM

[2] DNA

[3] DNA 50 µl

Template	DNA	λDNA	DNA	DNA
Dosage	0.1µg-1µg	0.5ng-5ng	10ng-100ng	0.1ng-10ng

[4] Cat. # P9021/P9022/P9023

[5] 25mM MgCl₂ Cat. # P9031 PCR Enhancer Cat. # P9041

Initial Denaturation	94	3 min
Denaturation	94	30 sec
Annealing	55-68 ^[1]	30 sec
Extension	72	Variable ^[2]
Final Extension	72	5-10 min

[1] Tm

[2] 2min/kb 20s/kb

loading buffer

DNA 1 2 3
DNA 1: 10000
DNA 4 PCR PCR Enhancer Cat. # P9041 MgCl₂
Cat. # P9031

1 DNA

2 Hotstart Taq DNA PCR 3'

1 TA

15-30 3' 3
G C GC Tm 55-65 GC 40-60%
GC Tm Tm