

SmartTaq™ DNA Polymerase

Code No. BSTaq001

Size: 100 reaction

Store and shipping at -20°C

Supplied Reagents: 10x

SmartTaq™ buffer	1 ml
SmartTaq™ DNA	100 reaction
polymerase dNTP mixture (2.5 mM)	500 µl

SmartTaq™ Storage

Buffer: Tris Base (pH7.8)	20 mM
KCl	100 mM
EDTA	0.1 M
DTT	1 mM
Tween 20	0.5 %
NP-40	0.5 %
Glycerol	50 %

10X SmartTaq™

Buffer Tris Base (pH7.8)	100 mM
KCl	500 mM
MgCl ₂	15 mM

Description :

SmartTaq™ DNA polymerase is a thermo-stable enzyme which isolated from *Thermus aquaticus*. The recombinant protein of this enzyme is expressed in *E. coli*. This protein is a 94kDa protein and has both 5' to 3' polymerase and exonuclease activity but without 3' to 5' exonuclease activity.

Unit Definition :

One unit will incorporate 10nmol of total dNTPs into acid-precipitable DNA in 30 min at 74°C

Application :

The application of SmartTaq™ DNA polymerase can amplify DNA sequence by polymerase chain reaction (PCR) or it can add adenine into the end of DNA sequence.

Reaction Mixture for PCR (for total 50 µl) :

10x SmartTaq™ buffer	5 µl
SmartTaq™ DNA	1 µl
polymerase dNTP	3 µl
Forward and Reverse primer	0.2 to 1 µM
Template	<500 ng
Sterilized distilled water	up to 50 µl

PCR condition

94 °C	3 min	} 30 cycle
94 °C	15 sec	
55 °C	20 sec	
72 °C	2 k/min	
72 °C	7 min	
4 °C	---	

PCR test

1 µl of SmartTaq™ can amplify:

- an 5.5 kb fragment form plasmid DNA.
- an fragment from 4 ng of cDNA.
- an fragment from 100 fg plasmid.

