AmpONE™ α-Taq premix

Ver. 0.94

Cat. No. **522 - 200** (reaction vol. 20 ㎕)
522 - 500 (reaction vol. 50 ㎕)

Storage at : -20 °C

Lot. No. A0000BCD

Expiration date : 2000.00.00

Components

α-Taq PCR premix 96 tubes (0.2 ml 8-tube strip x 12ea)
0.2 ml PCR tube storage rack

Description

α-Taq premix is made from geneall α-Taq DNA polymerase which is a suitable enzyme for long and accurate PCR. It has a high fidelity and productivity than Taq DNA polymerase. It can amplify even longer fragment up to 14 kb from human genomic DNA template. Most PCR products that amplified with α-Taq DNA polymerase, have one A added at 3' termini. This mix contains all reaction components required for PCR, such as reaction buffer, dNTP, gel loading dye, stabilizer and sediment in addition to Taq DNA polymerase. This mix is stable for 1 year at -20 ℃, 2 weeks at room temperature. It is lyophilized blue pellet type, so it is not necessary thawing time. It is controlled various reaction volume according to experience purpose. Therefor, this kit serve time -saving, cost-effective and good product. Included loading dye migrates through 1.0% agarose gels run in 0.5X TBE at approximately the same rate as DNA 300bp in length.

Storage condition

stable for 1 year at -20 ℃, 2 weeks at room temperture.

PCR master mix components

(reaction vol. 20 ㎕, 50 ㎕)

α-Taq DNA polymerase	2U, 4U
dNTP (mixture)	200 μM (800 μM)
reaction buffer (2.5 mM $MgCl_2$)	1X
loading dye & stabilizer	1X

Features

high efficiency, high fidelity
ready to use
stable for 2 weeks at room temperture (1 year at -20 ℃)
stable to thawing at 5 times

Application

general PCR reaction
TA-cloning
long PCR (human gDNA up to 14 kb)
multiplex PCR

Reaction mixture (example)

reaction vol.	20 ㎕	50 ㎕
α-Taq premix	- ㎕	- ㎕
primer 1 (10 pmol/㎕)	1 ㎕	1-2 ㎕
primer 2 (10 pmol/㎕)	1 ㎕	1-2 ㎕
template	1-50 ng	1-100 ng
DW	up to 20 ㎕	up to 50 ㎕
final reaction vol.	20 ㎕	50 ㎕

Thermal cycling condition

95 °C	2 min	
95 °C	20 sec	30 - 35 cycles
A °C	10 sec	
72 °C	**B** min	
72 °C	2-5 min	

A : The value is 4~6 lower than Tm of primers
Tm = 2 (A+T) + 4 (G+C)

B : below 3 kb 0.5 - 1 min/kb
more than 3 kb 1 - 2 min/kb

HQ buffer

- In GC-rich reaction, HQ buffer increases the activity of Taq DNA polymerase.
- HQ buffer removes a hair-pin structure of GC-rich region.
- The dilution factor of HQ buffer is variable, 0.5x - 2x, depending on a case by case basis.
- We recommend to use of HQ buffer in PCR reaction of long-size target.

HQ buffer (example)

reaction vol.	20 ㎕	50 ㎕
0.5X HQ	2 ㎕	5 ㎕
1X HQ	4 ㎕	10 ㎕
1.5X HQ	6 ㎕	15 ㎕
2X HQ	8 ㎕	20 ㎕

End note : For research use only. Not for use in diagnostic or theraputic procedures.