Dr.Q Taq DNA Polymerase

Product name: Dr.Q Taq DNA Polymerase,500u

Catalogue no.:Dr.QPCR004

Cat No	Package	conc
Dr.QPCR004	500u	5U/ul

Description:

DR.Q Taq DNA polymerase is a thermostable enzyme of isolated from Thermus aquaticus. This enzyme contain 5'-3' polymerase and 5'-3' exonuclease activity.

Storage buffer:

50mM Tris-HCl pH7.9, 50mM KCl, 0.1mM EDTA, 1mM DTT, 0.5mM PMSF , 50% lycerol.

10X reaction buffer: buffer A containing 15mMMgCl$_2$.

buffer B without $MgCl_2$

Unit description:

one unit is defined as the amount of enzyme that will incoporate 10n mole of dNTP into acid-insoluble material in 30 minutes at 74oC. The reaction conditions are: 50mM Tris-HCl pH8.8, 50mM NaCl, 5mM MgCl2, 200uM each of dATP, dCTP, dGTP, dTTP, 10 ug activated calf thymus DNA and 0.1mg/ml BSA in a final volume of 50 ul.

Storage:

50% glycerol (v/v), 20 mM Tris-HCl pH 8.7 at -20ºC, 100 mM KCl, 0.1 mM EDTA.

Source: E coli clone

Quality control:

The enzyme is free of nicking and priming activities, exonucleases and non-specific endonucleases. SDS/PAGE - 95 kD band. Activity and stability tested via thermo-cycling. The error rate per nucleotide per cycle is ~ 2.5 x 10^{-5}; the accuracy is ~ 4 x 10^4. Estimated half life at 95ºC is 1.5 hours.

Shipping and Storage conditions:

Shipping and temporary storage at -20 for up to 1 month at room temperature has no detrimental effects on the quality of DR.Q Taq DNA polymerase.

尉徠生物科技有限公司
FUTURE SCIENTIFIC CO.,LTD
地址：桃園縣龜山鄉文化一路259號工學大樓1F創新育成中心5884室
TEL：(03)211-8800#5884；(03)211-8299 MOBILE：0955-103293

PCR reaction mix:

Component	Volume
DR.Q Taq	0.5-1ul
10X buffer	10 ul
10mM dNTP	2 ul
Primer1 (20 pmol)	2-4 ul
Primer2 (20 pmol)	2-4 ul
template	1-10 ul
ddH_2O	Up to 100 ul
Total	100 ul

PCR cycles

Step	Temperature	Time	Cycle
Initial denaturation	94-95°C	1-3 mins	1
Denaturation	94-95°C	10-60sec	25-35
Annealing	50-68°C	10-30sec	
Extension	72°C	1min/1kb	
Final extension	72°C	1-10 mins	1

IMPORTANT:
Annealing temperature should be 2-6ºC
lower than the primer melting temperature.

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