ProteoGenix
Antibodies and Proteins

ProteoGenix SAS
Espace Européen de l'Entreprise
15 rue de La Haye
67300 Schiltigheim, France
Tel. +33 (0)3 90 20 54 70 - Fax +33 (0)3 88 56 16 88
contact@proteogenix.fr
www.ProteoGenix.science

Golden Taq Polymerase

Recombinant Taq Polymerase produced in bacterial expression system (*E.coli*)

Concentration: 5 U/µl
Sizes: 250 U, 400U, 500U, 1000U, 3000U, 5000U
Storage: Stable one year at -20°C

For research use only

DESCRIPTION

The Golden Taq Polymerase, from the hemophilic bacteria *Thermus aquaticus* is a highly thermostable DNA polymerase used for standard PCR applications in order to amplify DNA sequences. The recombinant form of this enzyme expressed in bacterial expression system (*E.coli*) has a molecular weight of ~95 kDa. Reaction buffer and an MgSO4 solution are included for possible optimizations.

REFERENCE	SIZE	TAQ POLYMERASE 5U/µL	REACTION BUFFER	MGSO4 BUFFER
PI-MB001-250	250U	50µL or lyophilized (For reconstitution add 50 µl of sterile water (included))	250 µl (10x concetrated)	200 µl 100mM
PI-MB001-400	400U	80µL or lyophilized (For reconstitution add 80 µl of sterile water (included))	400 µl (10x concetrated)	320 µl 100mM
PI-MB001-500	500U	100 µl or lyophilized (For reconstitution add 100 µl of sterile water (included))	500 µl (10x concetrated)	400 µl 100mM
PI-MB001-1000	1000U	200 µl or lyophilized (For reconstitution add 200 µl of sterile water (included))	1000 µl (10x concetrated)	800 µl 100mM
PI-MB001-3000	3000U	3*200 µl or lyophilized (For reconstitution add 3*200 µl of sterile water (included))	3* 1000 µl (10x concetrated)	3* 800 µl 100mM
PI-MB001-5000	5000U	5*200 µl or lyophilized (For reconstitution add 5*200 µl of sterile water (included))	5* 1000 µl (10x concetrated)	5* 800 µl 100mM

BATCH NUMBER

Please refer to the label on each tube

UNIT DEFINITION

One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into a DNA fragment in 30 minutes at 74°C

STORAGE BUFFER

Tris-HCl 20mM pH8; EDTA 0,1mM; DTT 1mM; Glycerol 50%; Tween20 0.5%; Nonidet P-40 0.5%.

REACTION BUFFER (1X)

Tris-HCl 20mM pH 8.8; (NH4)2SO4 10mM; 10 mM KCl; 2mM MgSO4; Triton X-100 0.1%.

Produced and packed in France

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PROTOCOL SUGGESTION

To carry out parallel reactions and avoid pipetting errors, prepare a PCR mix by mixing water, buffers, dNTPs and the Golden Taq Polymerase. The PCR mix must be produced for the number of reactions plus an additional one. Then aliquot the mix in the PCR tube and add the DNA matrix.

1. Vortex and centrifuge briefly the solutions after thawing :

2. In a sterile PCR tube mix all the reagents in the following order
(For 30 µL reaction) :

	Standard	**DMSO (optional)***
Product	**Volume**	
H2O Sterile Ultrapure**	s.q.f.*** 30µl	s.q.f. 30µl
Reaction Buffer 10X	3µl	3µl
dNTP (10mM each)	0,5µl	0,5µl
Forward primer (ex : 50µM)	0,5µl	0,5µl
Reverse primer (ex : 50µM)	0,5µl	0,5µl
DMSO (Option)	/	1,5µl
DNA matrix	10 to 200ng****	10 to 200ng
Golden Taq Polymerase	1µl	1µl

*For the matrices that have secondary structures that are hard to amplify
**Molecular biology grade or equivalent
***s.q.f.: sufficient quantity for
****10 to 100ng plasmid DNA or PCR fragment or cDNA; 100 to 200ng of gDNA

3. Vortex at low speed to mix the components, then briefly centrifuge the tube to bring the medium reaction in the bottom to the tube (if necessary).

4. If needed, add a thin layer of mineral oil on the medium reaction to avoid evaporation. (Not necessary for thermocycler equipped with a heated lid or equivalent device).

5. Places the tubes in the thermocycler and follow these conditions:

Steps	**Temperature**	**Time**	**Cycle(s)**
Initial denaturation	95°C	2min	1
Denaturation	92°C	1min	30
Annealing	60°C*	1min	
Extension	72°C	1min**	
Final extension	72°C	5min	1
Storage (option)	4°C	variable	1

*Adjust according the primers TM (here, example for two primers with TM 60°C)
**Adjust according the length of the DNA to synthetize (here, example for 2kb)