MyGo

REAGENTS FOR RESULTS

MyGo Taq Original

Cat. No. 8770 | 5351 | 9684

Component	500 Units (8770)	1000 Units (5351)	2000 Units (9684)
MyGo Taq Original (5u/µl)	1 x 100µl	2 x 100µl	4 x 400µl
10x MyGo Original Buffer + 30mM $MgCl_2$	2 x 1ml	4 x 1ml	8 x 1ml

This product is for research use only

1. STORAGE

Store all components at -20°C with minimal exposure to light. If stored correctly the kit will retain full activity for 12 months. The kit may be stored at 4°C for short term use (1 month). The kit can go through up to 30 freeze/thaw cycles with no reduction in performance.

2. TECHNICAL ASSISTANCE

If you have any questions, or experience any difficulties with MyGo Taq DNA Polymerase, please email reagentsupport@mygopcr.com, providing full details including amplicon size, reaction setup, cycling conditions and screen shots of gel images.

www.mygopcr.com

3. DESCRIPTION

MyGo Taq Original is a highly-purified, recombinant Taq DNA Polymerase designed for use in all routine PCR applications including genotyping, library construction and screening.

The enzyme is supplied with an optimised 10x buffer containing 30mM $MgCl_2$ designed to give high yields and superior performance on a wide range of templates including complex genomic DNA.

MyGo Taq Original has an error rate of approximately 1 error per 2.0×10^5 nucleotides incorporated. The enzyme is recommended for the amplification of up to 5kb. PCR products generated are A-tailed, and may be cloned into TA cloning vectors.

4. IMPORTANT NOTES

4.1 **10x MyGo Original Buffer:** The 10x MyGo Original Buffer contains enhancers, stabilizers and 30mM $MgCl_2$. The buffer system has been optimised for the best PCR results and we do not recommend adding further enhancers to the reaction.

4.2 **$MgCl_2$ and dNTPs:** We recommend a final reaction concentration of 3mM $MgCl_2$ to 1mM dNTPs (0.25mM each). The 10x MyGo Original Buffer includes 30mM $MgCl_2$. Additional $MgCl_2$ is not necessary.

4.3 **Template:** For cDNA use below 100ng per reaction. For eukaryotic DNA use between 5ng and 500ng per reaction.

4.4 **Primers:** We recommend using primer design software Primer 3 (http://frodo.wi.mit.edu/primer3/). Primers should have a melting temperature (Tm) of approximately 60°C. The final primer concentration in the reaction should be between 0.2µM and 0.6µM.

4.5 **Annealing:** We recommend performing a temperature gradient to experimentally determine the optimal annealing temperature. As an alternative, you can use a 55°C annealing temperature then increase in 2°C increments if non-specific products are present.

4.6 **Extension:** The recommended extension temperature is 72°C. The optimal extension time will depend on amplicon length and complexity of template. We recommend 15 seconds per kilobase (kb) for amplification from eukaryotic DNA (amplicons between 1kb and 6kb). For shorter amplicons, a 1 second extension will be sufficient.

5. REACTION SETUP

5.1 All reactions must be set up on ice.

5.2 Prepare a master mix using the following table:

Component	50µl reaction	Final concentration	Notes
10x MyGo Original Buffer + 30mM 30mM $MgCl_2$	5.0µl	1x Buffer, 3mM $MgCl_2$	
100mM dNTPs (25mM each)	0.5µl	1mM (0.25mM each)	
Forward primer (10µM)	2.0µl	400nM	See 4.4 above
Reverse primer (10µM)	2.0µl	400nM	
Template DNA	<100ng cDNA <500ng gDNA	variable	See 4.3 above
MyGo Taq Original (5u/µl)	0.25µl - 1.0µl		
PCR grade water	Up to 50µl total volume		

5.3 Cycle using the following conditions:

Cycles	Temperature	Time	Notes
1	95°C	1 minute	Initial denaturation
40	95°C 55°C to 65°C 72°C	15 seconds 15 seconds 1 to 90 seconds	Denaturation Anneal Extension (15 seconds per kb)