MyGo

REAGENTS FOR RESULTS

MyGo ProTaq Polymerase

Cat. No. 7277 | 1183

Component	250 Units (7277)	1000 Units (1183)
MyGo ProTaq Polymerase	1 x 50µl	4 x 50µl
5x MyGo ProTaq Buffer	2 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 ProTaq 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 ProTaq Polymerase is a high-performance enzyme designed for the amplification difficult templates. The enzyme is supplied with a 5x buffer containing dNTPs and $MgCl_2$ optimised to give the best results under challenging conditions such as the amplification of high GC targets and the presence of inhibitors.

MyGo ProTaq Polymerase uses antibody-mediated hot start to give fast, highly specific PCR. The enzyme is inactive at ambient temperatures, preventing the formation of primer-dimers and mis-primed products with the convenience of room temperature setup. The enzyme is activated at the start of a reaction with a 95°C incubation step. The enhanced efficiency and specificity of MyGo ProTaq Polymerase make it the ideal choice for the accurate amplification of long and complex templates.

MyGo ProTaq Polymerase is recommended for the amplification of human genomic DNA up to 20kb. The enzyme exhibits 2.5 fold higher fidelity than Taq DNA Polymerase. PCR products generated are A-tailed, and may be cloned into TA cloning vectors.

4. IMPORTANT NOTES

4.1 5x MyGo ProTaq Buffer: The 5x MyGo ProTaq Buffer contains 15mM $MgCl_2$, 5mM dNTPs, enhancers and stabilizers. The buffer system has been optimised for the best PCR results and we do not recommend adding further enhancers or $MgCl_2$ to the reaction.

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

4.3 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.

4.4 Annealing: We recommend performing a temperature gradient to experimentally determine the optimal annealing temperature. As an alternative, you can use a 57°C annealing temperature then increase in 2°C increments if non-specific products are present.

4.5 Extension: The recommended extension temperature is 72°C. The optimal extension time will depend on amplicon length and complexity of template. For eukaryotic DNA we recommend 15 seconds per kilobase (kb) for amplicons below 5kb, and 40-60 seconds per kb for amplicons between 5-20kb.

5. REACTION SETUP

5.1 Prepare a master mix using the following table:

Component	50µl reaction	Final concentration	Notes
5x MyGo ProTaq Buffer	10.0µl	1x	
Forward primer (10µM)	2.0µl	400nM	See 4.3 above
Reverse primer (10µM)	2.0µl	400nM	
Template DNA	<100ng cDNA <500ng gDNA	variable	See 4.2 above
MyGo ProTaq Polymerase (5u/µl)	0.25µl - 1.0µl		
PCR grade water	Up to 50µl total volume		

5.2 Cycle using the following conditions:

Cycles	Temperature	Time	Notes
1	95°C	1 minute	Initial denaturation and enzyme activation
25-35	95°C 55°C to 65°C 72°C	15 seconds 15 seconds 10 minutes*	Denaturation Anneal Extension (50 seconds per kb). *See 4.5 above