MyGo

REAGENTS FOR RESULTS

MyGo Taq Red Mix

Cat. No. 5622 | 3359

Component	200 Reactions (5622)	1000 Reactions (3359)
2x MyGo Taq Red Mix	5 x 1ml	25 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 Red Mix, please email reagentsupport@mygopcr.com, providing full details including amplicon size, reaction setup, cycling conditions and screen shots of gel images.

3. DESCRIPTION

MyGo Taq Red Mix is designed for use in all routine PCR applications including genotyping, library construction and screening. The mix includes MyGo Taq DNA Polymerase, dNTPs, $MgCl_2$, and a red tracking dye in an optimised buffer to give high yields and superior performance on a wide range of templates including complex genomic DNA. The tracking dye enables direct loading of PCR products onto agarose gels.

MyGo Taq DNA Polymerase is a versatile and robust enzyme, and is recommended for the amplification of up to 6kb. The enzyme has an error rate of approximately 1 error per 2.0×10^5 nucleotides incorporated. PCR products generated are A-tailed, and may be cloned into TA cloning vectors.

MyGo Taq Red Mix is ready-to-use and supplied in a single tube containing all the reagents required for trouble-free PCR setup.

www.mygopcr.com

4. IMPORTANT NOTES

4.1 **2x MyGo Taq Red Mix:** The 2x mix contains MyGo Taq DNA Polymerase, 6mM $MgCl_2$, 2mM dNTPs, enhancers, stabilizers and a red tracking dye. 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 55°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. 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.

4.6 **Dye migration:** MyGo Taq Red Mix includes a red dye for direct loading and tracking during agarose gel electrophoresis. The dye migration rate in a 2% agarose TAE gel is equivalent to 350bp of DNA. In a 1% agarose TAE gel the dye migration rate is equivalent to 600bp of DNA.

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
5x MyGo Taq Red Mix	25.0µl		
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
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)