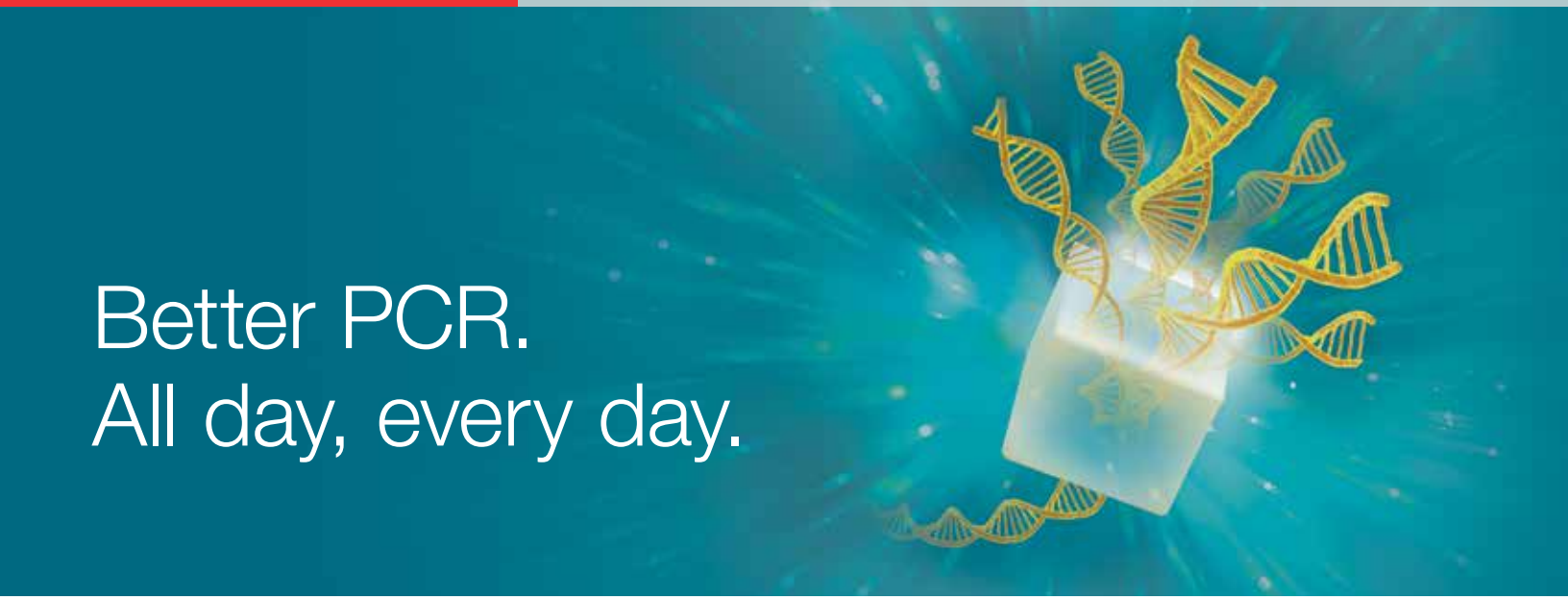

Better PCR.
All day, every day.

DreamTaq polymerase enables PCR performance no conventional *Taq* enzyme can match

Thermo Scientific™ DreamTaq™ DNA Polymerase is an enhanced *Taq* DNA polymerase optimized for standard PCR applications. It helps ensure higher yields and sensitivity (Figure 1), and longer PCR products than conventional *Taq* DNA polymerases. The specially optimized Thermo Scientific™ DreamTaq™ Buffer enables robust DNA amplification with minimal optimization of reaction conditions.

Why use DreamTaq DNA Polymerase?

- Higher yields, increased PCR sensitivity (down to ~30 pg), and longer target length than conventional *Taq* enzymes
- Robust amplification without additional $MgCl_2$ optimization
- Superior flexibility for a variety of formats
- Simplified workflow with direct gel loading

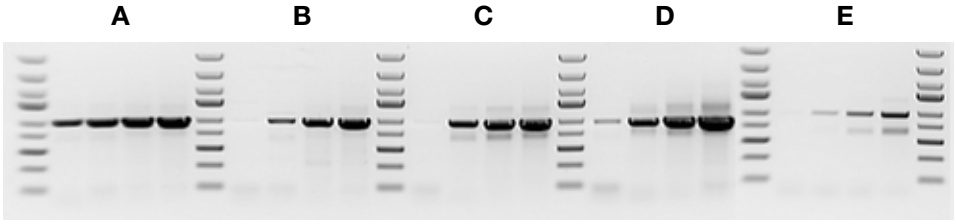

Figure 1. Higher yields with low amounts of DNA template. A 956 bp fragment from human genomic DNA was amplified with **(A)** DreamTaq DNA Polymerase and with *Taq* DNA polymerases from other vendors—**(B)** NEB™ OneTaq™, **(C)** Promega™ GoTaq, **(D)** Bioline™ MyTaq™ DNA Polymerase, and **(E)** Takara™ *TaKaRa*™ *Taq* DNA polymerases according to manufacturers' recommendations using 30 pg, 300 pg, 3 ng, and 30 ng of template DNA. Only DreamTaq DNA Polymerase was able to amplify from all template amounts giving high yields.

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Technical details

- Long fragment amplification—routinely amplifies 6 kb from human genomic DNA templates (longer fragments of up to 7.5 kb are possible (Figure 2) and 20 kb from lambda DNA templates
- Preoptimized DreamTaq Buffer with 20 mM Mg^{2+} concentration (Figure 3)
- Greater convenience with 2x master mix format and direct gel-loading
- Broad compatibility with all routine PCR applications including colony PCR, genotyping, clone screening, and others

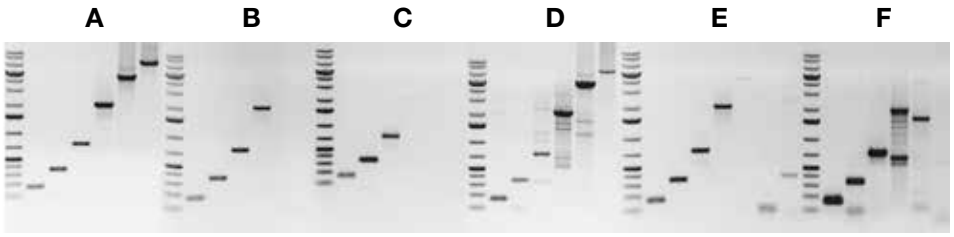

Figure 2. Robust amplification for a wide range of target lengths. DNA fragments of increasing length (160 bp, 345 bp, 727 bp, 1,988 bp, 4,473 bp, and 7,500 bp) were amplified with **(A)** DreamTaq DNA Polymerase and *Taq* DNA polymerases from other vendors—**(B)** Promega GoTaq G2 DNA Polymerase, **(C)** Bioline MyTaq DNA Polymerase, **(D)** NEB OneTaq DNA Polymerase, **(E)** *TaKaRa Taq* DNA Polymerase, and **(F)** KAPA Biosystems™ *Taq* PCR Kit) according to manufacturers' recommendations. Thermo Scientific™ GeneRuler™ 1 kb plus DNA Ladder was used as the ladder for each DNA polymerase. Only DreamTaq DNA Polymerase was able to amplify all fragments, even up to 7.5 kb, with high yields and specificity.

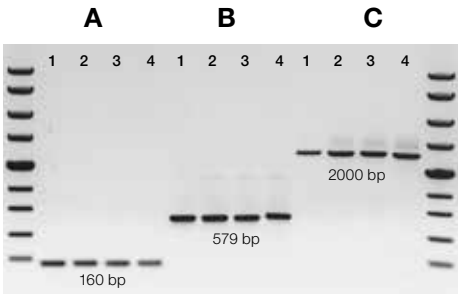

Figure 3. Optimal $MgCl_2$ concentration for diverse fragment amplification. Three human genomic DNA fragments of different lengths, **(A)** 160 bp, **(B)** 579 bp, and **(C)** 2,000 bp were amplified with an increasing amount of $MgCl_2$ concentration for each fragment, lane 1: 2 mM $MgCl_2$; lane 2: 2.5 mM $MgCl_2$; lane 3: 3mM $MgCl_2$; lane 4: 4 mM $MgCl_2$; and DNA ladder used : Thermo Scientific™ ZipRuler™ Express DNA Ladder. The 10X DreamTaq Buffer contains 20 mM $MgCl_2$. At 2 mM concentration, which is the final $MgCl_2$ concentration in a reaction with DreamTaq DNA Polymerase, all three fragments were amplified with high yields without any nonspecific PCR products.

Ordering information

Product	Quantity	Cat. No.
DreamTaq DNA Polymerase	200 U/µL	EP0701
	500 U/µL	EP0702
	5 x 500 U/µL	EP0703
	20 x 500 U/µL	EP0704
	10 x 500 U/µL	EP0705
DreamTaq PCR Master Mix	200 x 50 µL reactions	K1071
	1,000 x 50 µL reactions	K1072

Product	Quantity	Cat. No.
DreamTaq Green DNA Polymerase	200 U/µL	EP0711
	500 U/µL	EP0712
	5 x 500 U/µL	EP0713
	20 x 500 U/µL	EP0714
DreamTaq Green PCR Master Mix	200 x 50 µL reactions	K1081
	1,000 x 50 µL reactions	K1082

Find out more at **thermofisher.com/dreamtaq**

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