

Platinum *Taq* Hot Start DNA Polymerase



Achieve platinum status—
hold your work to a higher standard

You demand accurate, robust results. You expect specificity and reliability. Settle for nothing less than the hot-start PCR enzyme widely trusted and cited by researchers in PCR applications such as genotyping, gene expression profiling and next-generation sequencing. Accelerate your experiments with Invitrogen™ Platinum™ *Taq* reagents that offer:

- High specificity and increased yields with antibody-mediated hot-start PCR
- Convenient room-temperature reaction setup
- Direct gel loading with green buffer formats
- Versatile formulation for a broad range of amplicons

High specificity and yields

Platinum hot-start technology is based on proprietary antibodies that inhibit enzyme activity at room temperature, reducing nonspecific target amplification at lower temperatures. Hot-start PCR results in a greater yield of the target amplicon with the added convenience of room-temperature PCR setup. Extended stability of the hot-start polymerase at room temperature enables high-throughput applications.

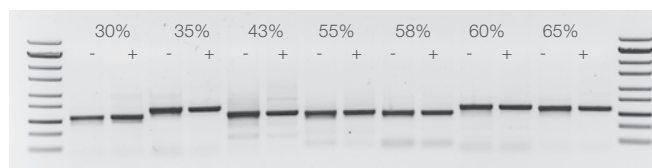


Figure 1. Invitrogen™ Platinum™ *Taq* Hot Start DNA Polymerase provides high specificity and robust yields. Seven fragments, 500 to 800 bp in length and of varying GC content, were amplified from 30 ng of human gDNA using both colorless (-) and green (+) PCR buffers.

Simplified PCR workflow

Platinum *Taq* Hot Start products offer the convenience of a green buffer, which includes a density reagent and two tracking dyes, for direct gel loading of PCR products. The green buffer eliminates tedious steps and is compatible with downstream applications, including DNA sequencing, ligation and restriction digestion.



Figure 2. Simplified PCR workflow. Convenient Invitrogen™ Platinum™ Hot Start Master Mixes reduce the number of steps during PCR reaction setup. Green buffer enables direct gel loading of PCR products, eliminating tedious steps of dye addition. Left lane of gel image shows reaction mixture with green buffer prior to electrophoresis. Right lanes of gel show yellow and blue dye migration following 5 and 15 minutes of electrophoresis.

High sensitivity

Even low-abundance DNA templates can be detected for accurate results. The high sensitivity of Platinum *Taq* Hot Start PCR reagents is a great advantage in experiments where there is a limited amount of starting material or the target DNA is in low concentration in the sample.

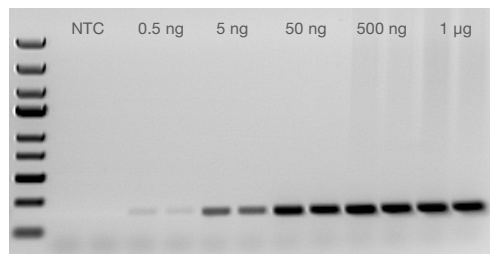


Figure 3. High sensitivity and reliable amplification from low amounts of input DNA. Amplification of a 222 bp human gDNA fragment from DNA input ranging from 0.5 ng (~150 copies) to 1 µg using Invitrogen™ Platinum™ Green Hot Start PCR 2X Master Mix. Each reaction was performed in duplicate. NTC = no-template control.

Robust amplification of high-GC regions

Invitrogen™ Platinum™ Hot Start PCR 2X Master Mixes are supplied with a separate vial of a special GC enhancer formulated for specific amplification and improved yields of targets with difficult-to-amplify, high-GC content.

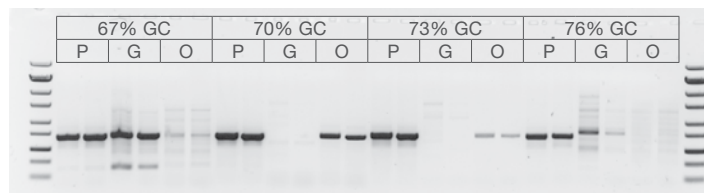


Figure 4. Invitrogen Platinum Hot Start PCR Master Mix provides robust amplification of GC-rich DNA. 700–750 bp GC-rich fragments were amplified from 30 ng of human gDNA using Platinum Hot Start PCR 2X Master Mix supplemented with GC Enhancer (P) or hot-start *Taq* PCR master mixes from other vendors (O, G).

Ordering information

Product	Quantity	Cat. No.
Platinum <i>Taq</i> Green Hot Start DNA Polymerase	120 x 50 µL rxns	11966-018
	300 x 50 µL rxns	11966-026
	600 x 50 µL rxns	11966-034
	5,000 x 50 µL rxns	11966-083
Platinum <i>Taq</i> DNA Polymerase	120 x 50 µL rxns	10966-018
	300 x 50 µL rxns	10966-026
	600 x 50 µL rxns	10966-034
	5,000 x 50 µL rxns	10966-083

Product	Quantity	Cat. No.
Platinum Hot Start PCR 2X Master Mix	50 x 50 µL rxns	13000-012
	200 x 50 µL rxns	13000-013
	1,000 x 50 µL rxns	13000-014
Platinum Green Hot Start PCR 2X Master Mix	50 x 50 µL rxns	13001-012
	200 x 50 µL rxns	13001-013
	1,000 x 50 µL rxns	13001-014

Find out more at thermofisher.com/platinumtaq

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