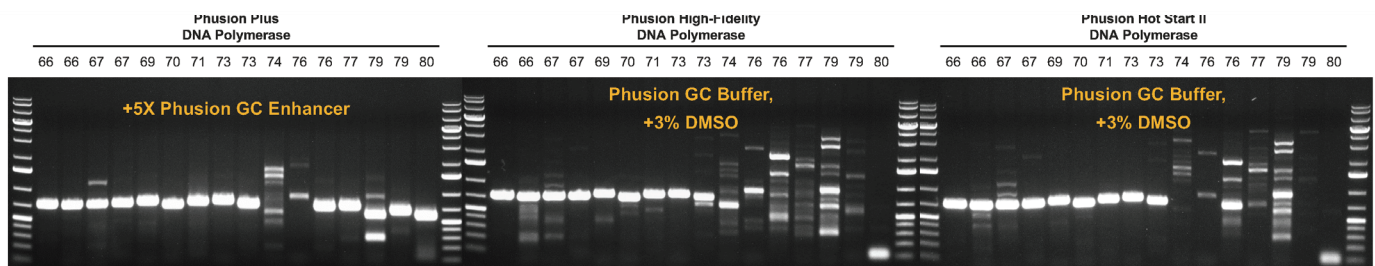


# Higher Success and Simpler Setup with a Trusted PCR Enzyme

Thermo Scientific™ Phusion™ Plus DNA Polymerase is the latest addition to our family of Phusion™ products, which are Pyrococcus polymerase-like high-fidelity enzymes fused to a DNA-binding domain. This unique protein fusion technology enables Phusion Plus DNA Polymerase to generate PCR sequences with high accuracy, sensitivity, and inhibitor tolerance. In addition, its specialized reaction buffer allows PCR amplification without the need to calculate primer annealing temperatures, helping you save time and avoid mistakes in PCR runs.



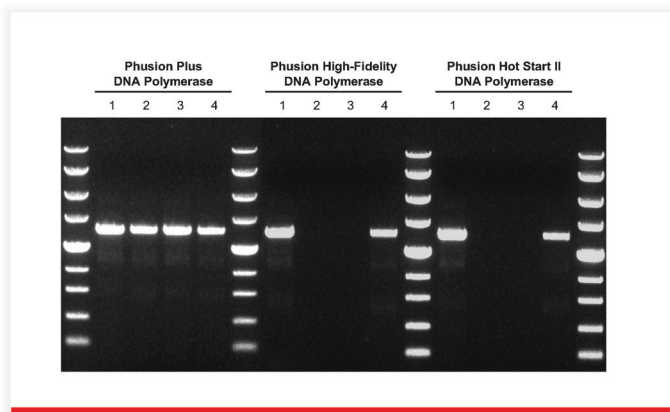
## Better results with GC-rich sequences



**Efficient GC-rich amplification of Phusion Plus DNA Polymerase.** 16 targets with high GC content (their percentages indicated) were amplified from 50 ng of human gDNA. The molecular weight marker is [Thermo Scientific™ ZipRuler™ Express DNA Ladder 2](#).

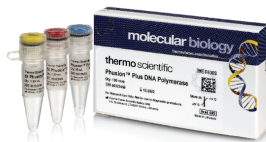


# Higher tolerance to PCR inhibitors



**High inhibitor tolerance of Phusion Plus DNA Polymerase.** A 2 kb target was amplified from 50 ng of human gDNA. The reaction mixtures contained at a final concentration of: 1—no inhibitor, 2—humic acid (0.5 µg/mL), 3—hemin (2.5 µM), or 4—xylan (250 µg/mL). The molecular weight marker is the [GeneRuler 1 kb Plus DNA Ladder](#).

## Comparison of Phusion Plus, Phusion High-Fidelity, and Phusion Hot Start II DNA polymerases



	Phusion Plus DNA Polymerase	Phusion High-Fidelity DNA Polymerase	Phusion Hot Start II DNA Polymerase
<b>Fidelity</b> (vs. <i>Taq</i> DNA polymerase)	>100x	50x	50x
<b>Hot-start modification</b> (Affibody molecule-mediated)	Yes	No	Yes
<b>Universal annealing temperature</b> (no $T_m$ calculator needed)	Yes	No	No
<b>Universal cycling protocol</b> (co-cycling targets of different length)	Yes	No	No
<b>PCR sensitivity</b>	+++	++	++
<b>GC-rich amplification</b>	+++ (New GC enhancer)	++	++
<b>Inhibitor tolerance</b>	+++	++	++
<b>PCR yields and specificity</b>	+++	+++	+++
<b>Benchtop stability</b> (of assembled reactions)	Up to 24 hr	N/A	Up to 24 hr
<b>Stand-alone and master mix formats</b>	Yes	Yes	Yes
<b>Amplification length</b>	Up to 10 kb / 20 kb	Up to 7.5 kb / 20 kb	Up to 7.5 kb / 20 kb
<b>Standalone enzyme</b>	Colorless	Colorless Green	Colorless Green
<b>Master mix</b>	Colorless Green	Colorless with HF Buffer Colorless with GC Buffer	Colorless Green

\*The following table compares technical features of Phusion Plus DNA polymerase and its predecessors. Its improved features are shaded in blue.

### Ordering information

Description		Cat. No.
Phusion Plus DNA Polymerase	100 reactions	F630S
Phusion High-Fidelity DNA Polymerase	100 reactions	F530S
Phusion Hot Start II DNA Polymerase	100 reactions	F549S

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