

Portfolio Overview

DeCodi-Fi™

High-Fidelity Polymerase Kits

Same core enzyme, tailored to different needs.
Find your best fit.

		Amplicon Length	GC Rich templates	Fidelity	Low DNA input	Multiplex Compatibility	Uracil tolerance	Resistance to inhibitors
DeCodi-Fi™ PCR kit	High-Fidelity Buffer	++++ (<44 kb)	++ (30-65%)	++++	++++ (>5 pg)	+++	++++	++
	GC-Buffer	+++ (<20 kb)	+++ (<80%)	++	+++ (>100 pg)	++	++++	++
DeCodi-Fi™ All-In-One Mix		++++ (<44 kb)	++ (30-65%)	+++	++++ (>5 pg)	+++	++++	++
DeCodi-Fi™ Long&Complex		+++ (<30 kb)	++++ (<90%)	++	+++ (>100 pg)	++	++++	++
Direct PCR kits								
DeCodi-Fi™ Plant Direct		+ (<2 kb)	++ (30-60%)	++	++ (>1 ng)	+++	++++	++++ (plants)
DeCodi-Fi™ Blood Direct		++ (<16 kb)	++ (30-60%)	++	++ (>1 ng)	+++	++++	++++ (blood/ preservatives)

Powered by our DeCodi-Fi™ High Fidelity polymerase, engineered for high fidelity, long reads, fast cycling, low input, and uracil tolerance.

Longer reads. Tougher samples. Faster workflows.

DeCodi-Fi™ High-Fidelity Polymerase Kits

Go long. Get the full picture of the genome.

DeCodi-Fi™ is a high-fidelity DNA polymerase built for long-range PCR, amplifying fragments up to 44 kb with exceptional accuracy, high yield, and fast cycling from ultra-low input. All-in-one and PCR kit formats optimized for workflows like long-read sequencing and genome assembly, it enables reliable results even from limited or challenging DNA.

TWO FORMATS AVAILABLE

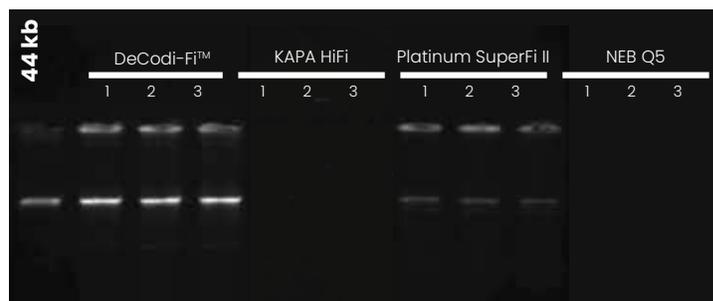
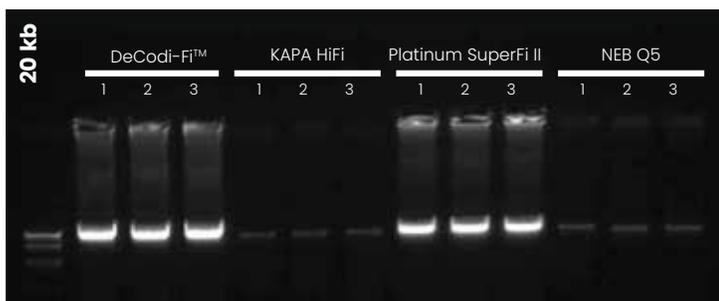
- ◆ DeCodi-Fi™ All-in-One Mix
- ◆ DeCodi-Fi™ High-Fidelity PCR Kit

HIGHLIGHTS

- ◆ **LONG FRAGMENTS**
Up to 44 kb amplification.
- ◆ **LOW INPUT**
As little as 5 pg of input DNA.
- ◆ **HIGH FIDELITY**
60% lower error rates.
- ◆ **FAST CYCLING**
<15 sec/kb extension.
- ◆ **HIGH YIELD, LOW BIAS**
High DNA recovery and reliable amplification.
- ◆ **URACIL TOLERANCE**
For epigenetic workflows.

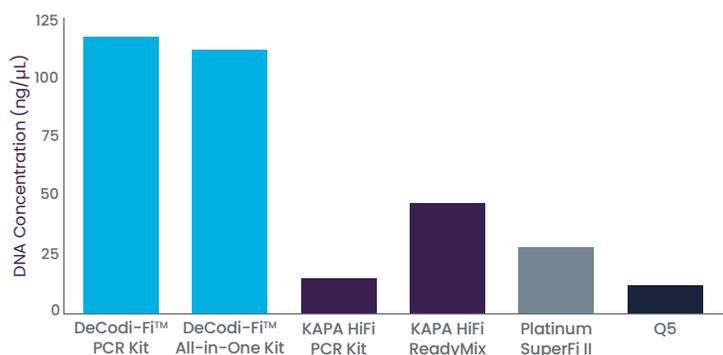
PERFORMANCE DATA

LONG AMPLIFICATION



Amplification of lambda DNA fragments 20 kb and 44 kb with DeCodi-Fi™ High-Fidelity Polymerase, Kapa HiFi, Platinum SuperFi and Q5. Each target was amplified from low input (1ng). Reactions were performed following the optimized conditions for each enzyme and using 24 cycles. The experiment was run in triplicate.

HIGH YIELD



DNA concentration obtained from 25 μL of lambda 15 kb PCR reaction using DeCodi-Fi™ PCR kit, DeCodi-Fi™ All-in-One Mix and competitors enzymes (KAPA HiFi, Platinum SuperFi II and Q5). The experiment was run in triplicate.

LOW INPUT



Amplification of the 17.6 kb human beta globin gene was performed using DeCodi-Fi™ High-Fidelity Polymerase and KOD Xtreme™ Hot Start DNA Polymerase. Each target was amplified from different inputs in a 25 μL reaction: 1000 pg, 125 pg, and 50 pg. A no-template control (0 pg) was also included. All reactions were performed following the optimized conditions for each enzyme and using 30 cycles. The experiment was run in triplicate.

DeCodi-Fi™ LONG&COMPLEX

Amplify what others can't.

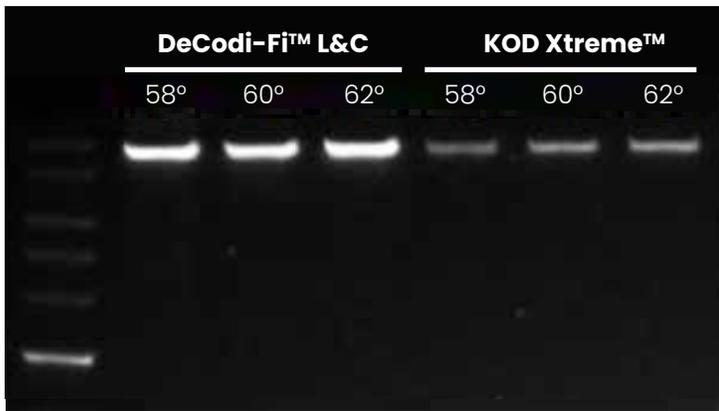
Optimized for the toughest templates: long fragments, ultra-GC-rich regions, and repetitive sequences, with the fidelity and precision that define the DeCodi-Fi™ kits. Built for long-read sequencing, gene synthesis, and complex genomic assemblies, it enables reliable and accurate amplification even from low-input complex samples where other polymerases fail.

HIGHLIGHTS

- ◆ **LONG COMPLEX FRAGMENTS**
Up to 30 kb from genomic DNA.
- ◆ **HIGH GC CONTENT TOLERANCE**
Up to 90% GC.
- ◆ **PERFORMANCE ON REPEAT REGIONS**
Even on GC-rich repeat regions.
- ◆ **LOW INPUT**
As little as 5 pg of input DNA.
- ◆ **FAST CYCLING**
<15 sec/kb extension.
- ◆ **ALL-IN-ONE FORMAT**
Ready to use 2X mastermix.

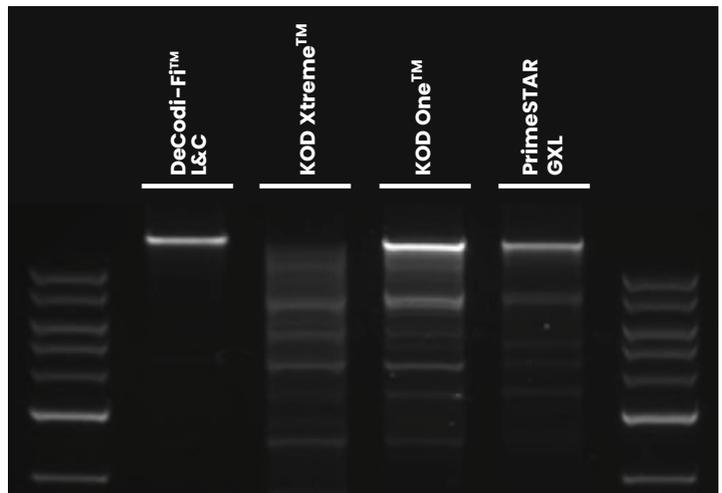
PERFORMANCE DATA

EXTREME GC CAPABILITY



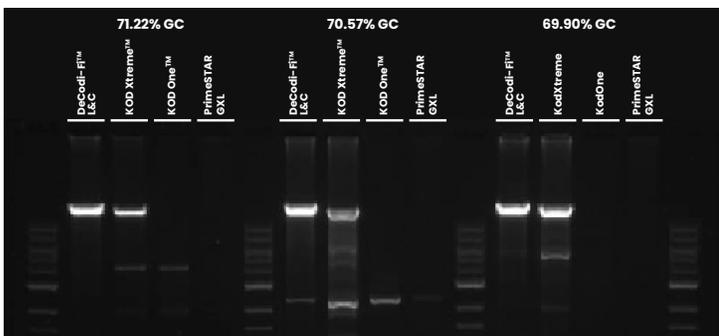
Amplification of the 10 kb human IGF2R gene, containing a 90% GC-rich region, using DeCodi-Fi™ Long&Complex and KOD Xtreme™ polymerases. Reactions were performed from 10ng of input DNA under each enzyme's optimized conditions, with annealing temperatures of 58°C, 60°C, and 62°C, and 28 PCR cycles.

LONG-RANGE POWER



Amplification of human DNA 30 kb with DeCodi-Fi™ Long&Complex, KOD Xtreme™, KOD One™ and PrimeSTAR GXL. Each target was amplified from 10 ng of input. Reactions were performed following the optimized conditions for each enzyme and using 30 cycles.

HIGH-COMPLEXITY ACCURACY



Amplification of *Streptomyces leeuwenhoekii* gDNA 20kb with DeCodi-Fi™ Long&Complex, KOD Xtreme™, KOD One™ and PrimeSTAR GXL. All PCRs contained 4ng of input. Reactions were performed following the optimized conditions for each enzyme and using 27 cycles.

DeCodi-Fi™ PLANT DIRECT

From field to PCR. Skip the purification.

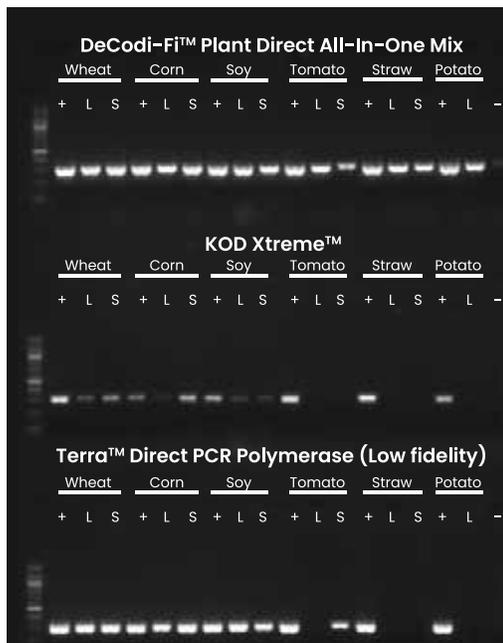
Enables high-fidelity PCR directly from crude plant extracts, no purification needed. It tolerates inhibitors like polyphenols and polysaccharides, delivering consistent results across diverse species and tissues, with the fidelity and precision that define the DeCodi-Fi™ kits. Ideal for genotyping, transgene detection, and high-throughput plant workflows.

HIGHLIGHTS

- ◆ **HIGH INHIBITOR TOLERANCE**
Handles natural inhibitors, no cleanup needed.
- ◆ **DIVERSE PLANT TYPES AND TISSUES**
Performs on corn, soybean, wheat, strawberry, and more.
- ◆ **MULTIPLEX READY**
Even Run multiple targets directly from crude extracts.
- ◆ **ALL-IN-ONE FORMAT**
Ready to use 2X mastermix.

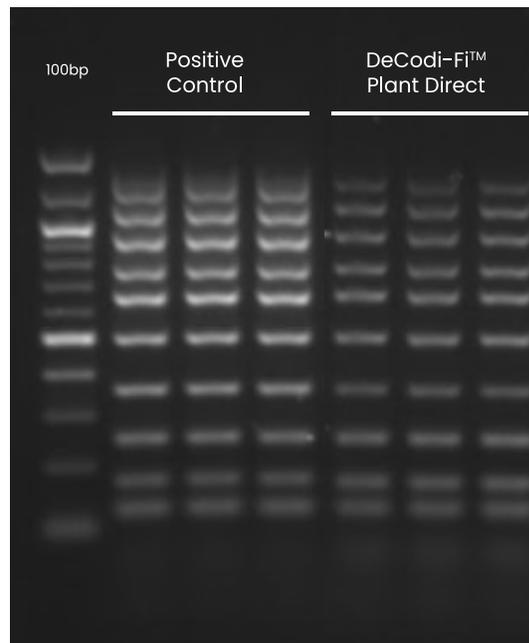
PERFORMANCE DATA

AMPLIFY DIVERSE PLANT TYPES AND TISSUES



Comparison of direct PCR amplification (template size: 326 bp) across various plant types using DeCodi-Fi™ and competitor polymerases. HotSHOT crude extracts were prepared from leaf (L) and seed (S) tissues of wheat, corn, soybean, tomato, strawberry, and potato. Reactions (25 μ L) contained 20% HotSHOT extract and were run at Tm 58°C for 35 cycles. 1 μ L of PCR product was loaded per lane, with (+) 5 ng purified DNA as the positive control and NTC as the no-template control.

MULTIPLEX CAPABILITY



Multiplex PCR amplification of ten target fragments (124, 172, 252, 365, 503, 648, 761, 920, 1094, and 1261 bp) from wheat DNA using DeCodi-Fi™ Plant Direct and a positive control (10 ng of purified wheat DNA). All reactions were performed in triplicate, with 0.1 μ L of PCR product loaded per lane.

SHORTENED WORKFLOW

With DeCodi-Fi™ PLANT DIRECT



Without DeCodi-Fi™ PLANT DIRECT



DeCodi-Fi™ BLOOD DIRECT

From blood to PCR. Skip the purification.

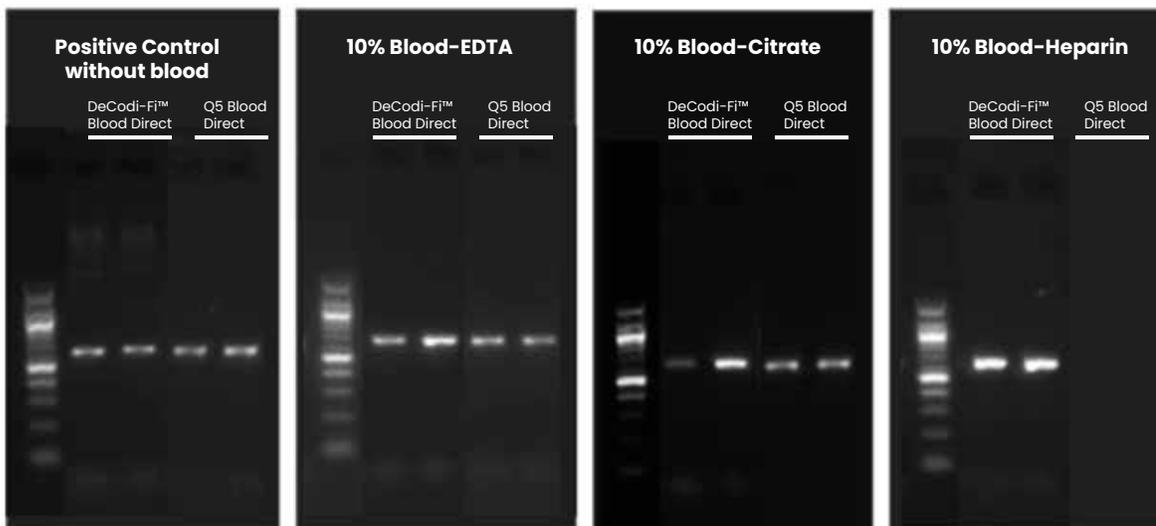
Enables high-fidelity amplification directly from blood preserved or stored on filter paper, no purification required. With tolerance to EDTA, citrate, and heparin, it delivers reliable results and the trusted performance of the DeCodi-Fi™ kits. Ideal for genotyping, forensics, and clinical workflows requiring fast, extraction-free PCR.

HIGHLIGHTS

- ◆ **HIGH INHIBITOR TOLERANCE**
Handles EDTA, citrate, heparin, no purification needed.
- ◆ **SAMPLE FLEXIBILITY**
Works with fresh, preserved, or dried blood on filter paper.
- ◆ **LOW INPUT**
Performs reliably even with limited sample volume.
- ◆ **ALL-IN-ONE FORMAT**
Ready-to-use 2X mastermix.

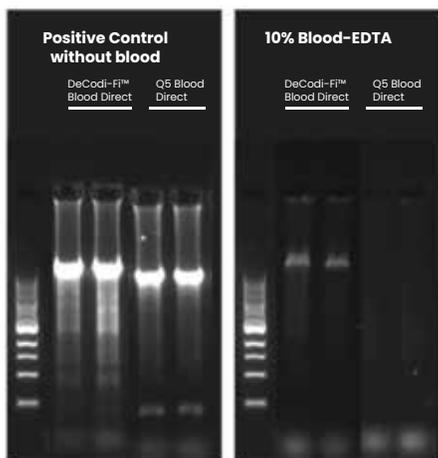
PERFORMANCE DATA

AMPLIFY DIRECT FROM HUMAN WHOLE BLOOD



Comparison of direct PCR amplification (template size: 584bp) across various samples of human blood preserved with EDTA, citrate and heparin using DeCodi-Fi™ Blood Direct and Q5 Blood Direct.

ROBUST PERFORMANCE WITH LONG FRAGMENTS



Comparison of direct PCR amplification of a human genomic amplicon of 17kb from 10% EDTA-preserve human whole blood using DeCodi-Fi™ Blood Direct and Q5 Blood Direct.