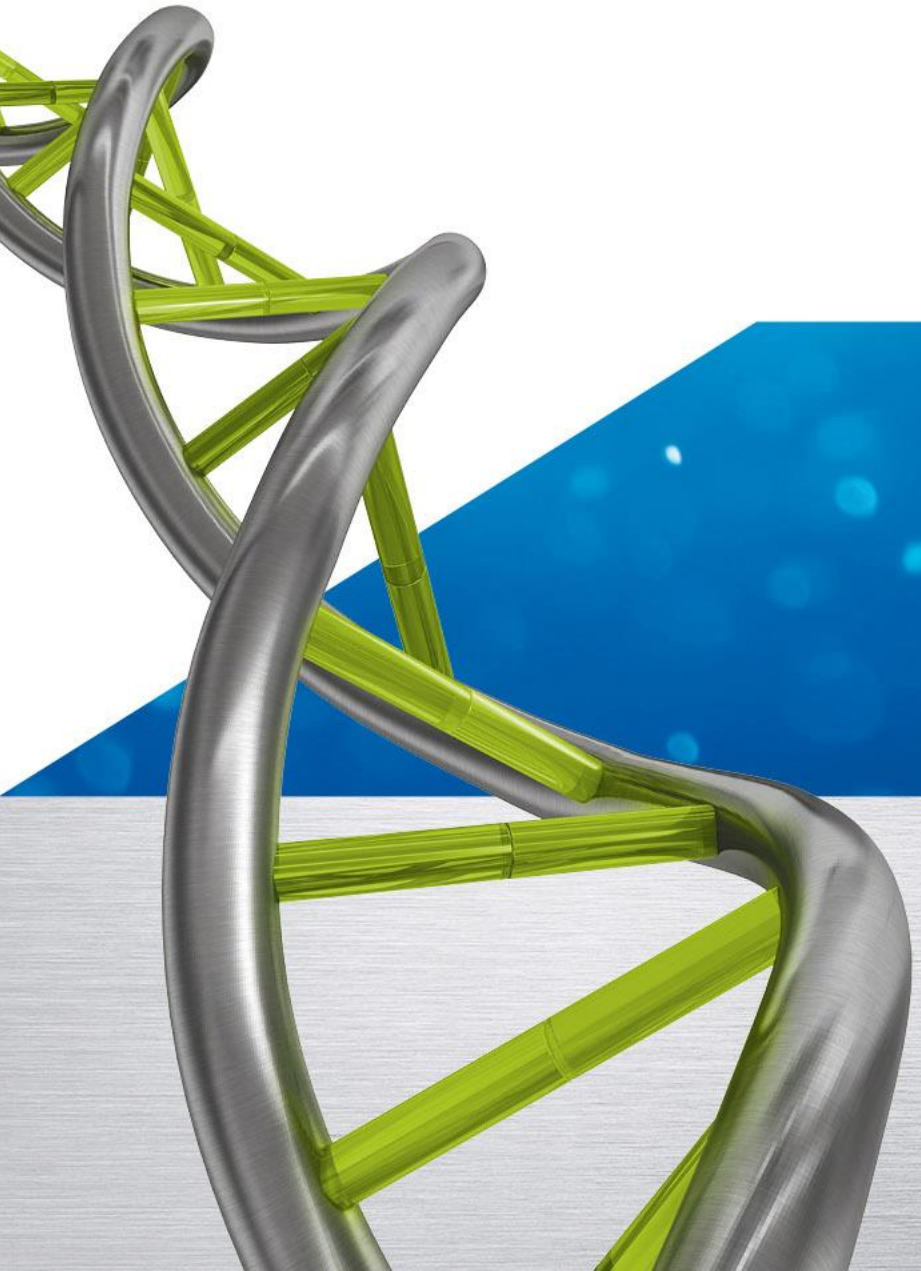

KAPA3G HotStart DNA Polymerase

Made for IVD

Date / Name Presenter Minion 14pt

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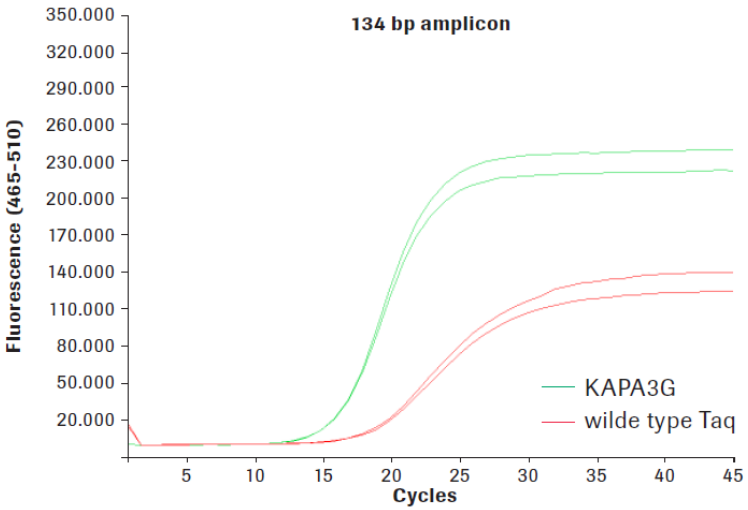
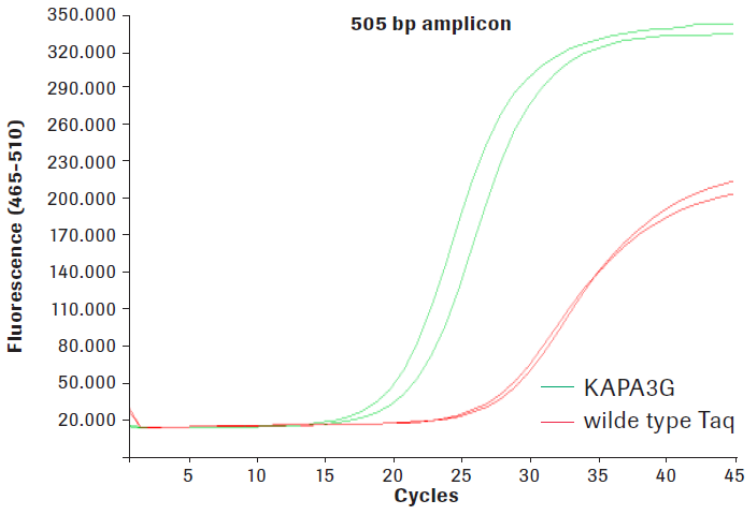
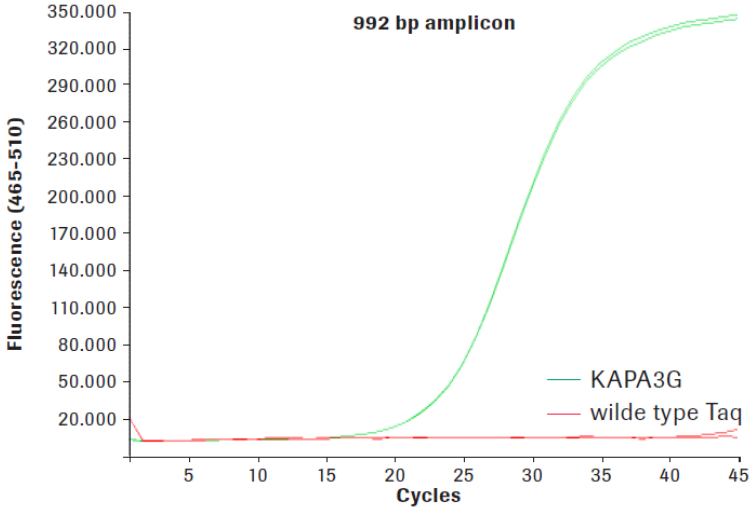
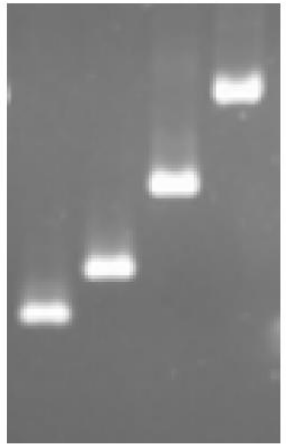
Nearly 1000 bp in 1 second extension time without compromising fluorescence or yield





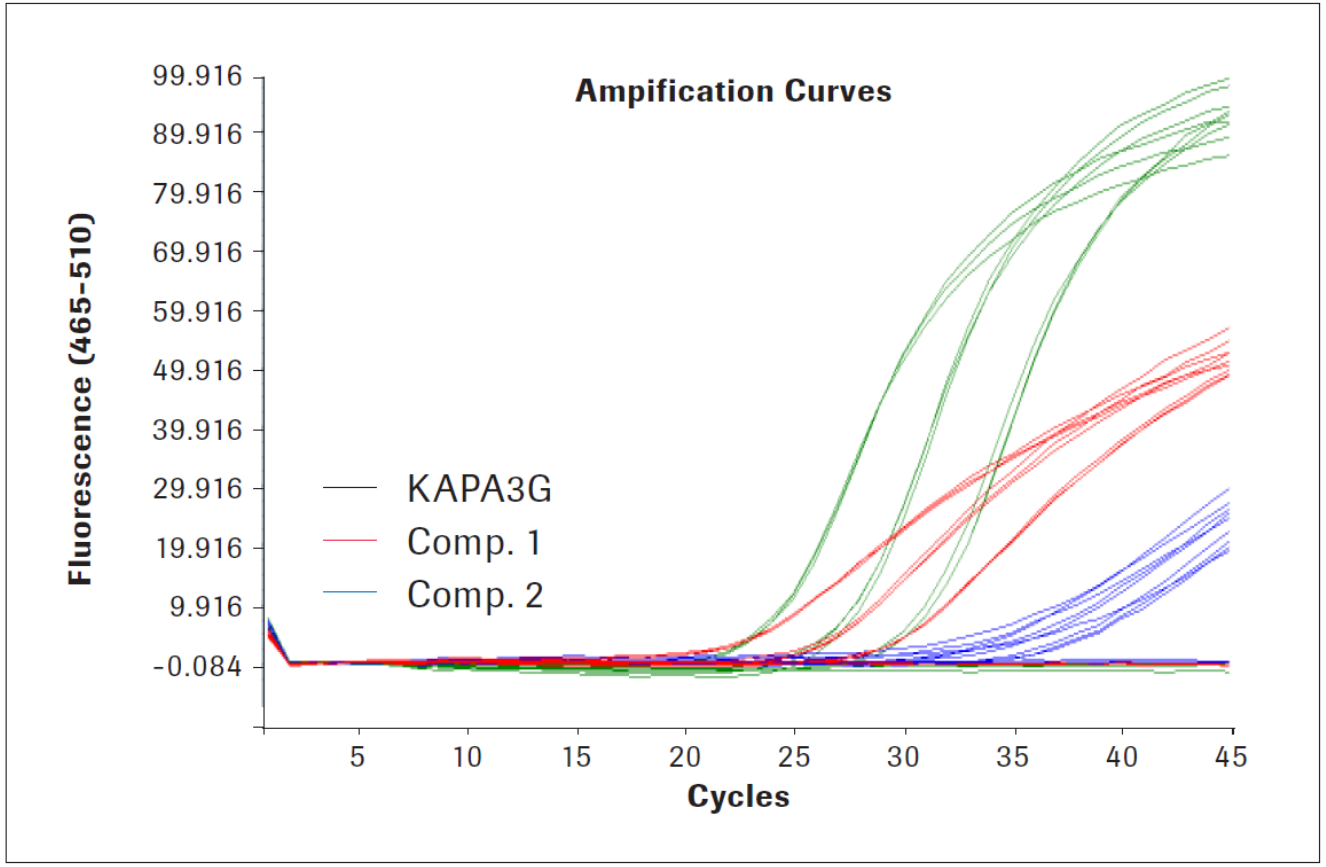




1. 134 bp
2. 243 bp
3. 505 bp
4. 992 bp

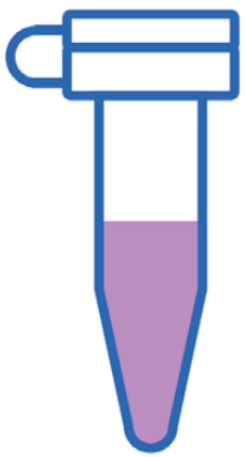
Enhanced amplification efficiency compared to wildtype Taq polymerase.
KAPA3G DNA Polymerase consistently achieves higher fluorescence and yields for targets of various lengths with only one second extension time.

KAPA3G HotStart DNA Polymerase excels in a fast protocol



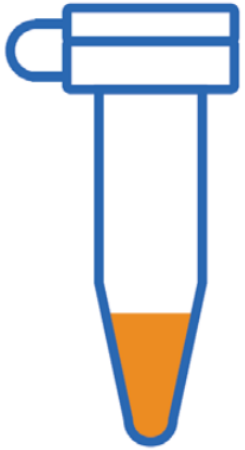
Of three tested polymerases, KAPA3G is the only one that performs well with a fast protocol. KAPA3G DNA Polymerase handles one-second extension and denaturation times with ease, producing consistently high amplification curves. All polymerases were used according to manufacturer's instructions (total assay run time: 23 minutes).

KAPA3G DNA Polymerase exhibits robust performance in presence of a broad range of inhibitors



Patient sample or sample collection tubes

- Hematin 50µM
- Ultra Serum 0.2 %
- Plasma EDTA 0.2 %
- Plasma Citrate 2 %
- Stool 0.05 %
- Sputuml 0.5 %
- Nasal swab > 0.5 %
- Melanin > 3.5ng/µl



Sample preparation method

- TRIzol® 0.5 %
- Ethanol 8 %
- SDS 0.01 %
- Bisulfite 0.3 %

KAPA3G DNA Polymerase was tested with a broad range of inhibitors inherent to liquid biopsies, tissues or standard sample preparation methods. Tolerance is defined as a shift in Cp of ≤ 3 and in fluorescence of ≥ 50% of the control total fluorescence

Robust multiplexing even in presence of common PCR inhibitors

Inhibitor	FAM				HEX				Cy5			
	cp-shift ≤ 3		fluorescence ≥ 50 %		cp-shift ≤ 3		fluorescence ≥ 50 %		cp-shift ≤ 3		fluorescence ≥ 50 %	
SDS 0.01 %	✓	✗	✓	✗	✓	✗	✓	✗	✓	✗	✓	✗
EtOH 3 %	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EDTA 3mM	✓	✗	✓	✗	✗	✗	✗	✗	✓	✗	✓	✗
Citrat 3mM	✓	✗	✓	✗	✓	✓	✓	✓	✓	✗	✓	✗
Urea 180 mM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hematin 30 µM	✓	✗	✓	✗	✓	✗	✓	✗	✓	✗	✓	✗
Heparin 0.1IU/ml	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗
Gua SCN 0.25 %	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗
Bisulfit 0.1 %	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
Bile Salt 0.075 %	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗

KAPA3G
Competitor
✓ passed
✗ failed

High-quality outcomes from multiplex assays spiked with common inhibitors. KAPA3G shows superior performance with a triplex assay in the presence of inhibitors compared to a competitor polymerase (optimization steps were included that deviate from manufacturer's instructions). Tolerance is defined as a shift in Cp of ≤ 3 and in fluorescence of ≥ 50 % of the control total fluorescence. Total assay run times: KAPA3G: 43 minutes; competitor enzyme: 86 minutes.

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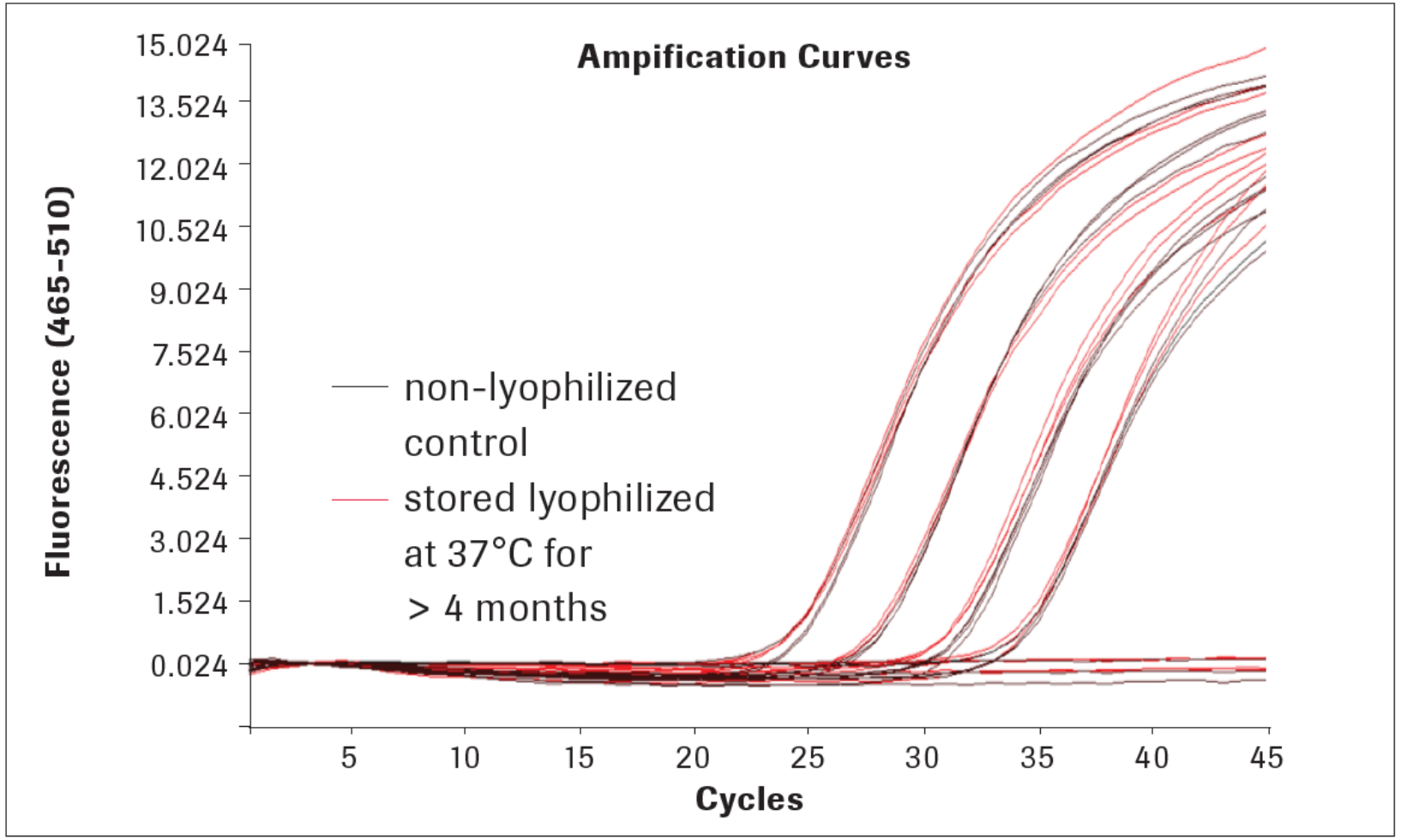
Lyophilized KAPA3G HotStart DNA Polymerase can be stored for several months at 37°C without loss in performance



Lyophilized KAPA3G DNA Polymerase retains enzymatic activity even at high storage temperatures. Stored at 37°C for over 4 months, the lyophilized format delivers the same high performance as non-lyophilized enzyme stored at –20°C.

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Data on file at Roche

For further processing only

CustomBiotech from Roche

Thank you for your attention