

DyNAmo™

qPCR Kits

For SYBR® Green
and Probe chemistries



DyNAmo™

qPCR Kits

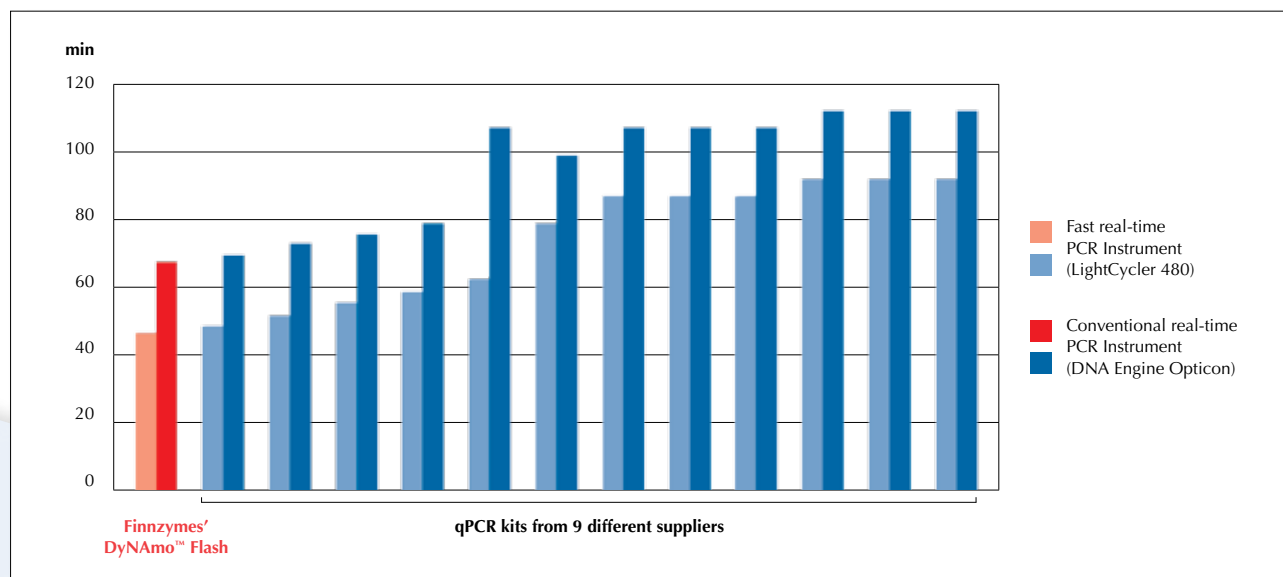
Finnzymes' DyNAmo™ qPCR Kits are a superior choice for quantitative real-time analysis. These kits offer excellent performance in detection and quantitation of DNA and RNA sequences from various sources. The DyNAmo qPCR Kit family features optimized kits for fast and conventional qPCR. Kits utilizing either SYBR® Green or probe chemistries for various platforms are available. All DyNAmo qPCR Kits are provided as convenient 2x master mixes - only template and primers need to be added.

The **DyNAmo™ Flash SYBR® Green qPCR Kit** and **DyNAmo™ Flash Probe qPCR Kit** offer enhanced performance for real-time qPCR. These kits provide sensitive and reproducible detection of target DNA with shorter run times in both fast and conventional instruments. The **DyNAmo™ cDNA Synthesis Kit** is an optimal choice when the starting material is RNA. The kit is optimized for quantitative reverse transcription required for qPCR analysis and can be used in conjunction with all qPCR kits.

Advantages of DyNAmo™ Flash qPCR Kits

- Extremely fast protocols: combined annealing and extension step of only 15 s
- Specific and sensitive detection of a wide range of template concentrations
- Included dUTP allows the use of UNG for prevention of carry-over contamination
- Convenient 2x master mix and optimized protocols
- Validated with all major real-time instruments
- Licenced for qPCR

Time savings with both fast and conventional real-time PCR instruments



DyNAmo Flash qPCR Kits allow short run times with both fast and conventional real-time instruments. 13 probe-based qPCR kits from 10 suppliers were tested according to suppliers' recommendations. DyNAmo Flash Probe qPCR Kit delivers results faster than any other kit tested. Similar time savings are achieved with DyNAmo Flash qPCR Kit for SYBR Green chemistry.

DyNAmo™ Flash SYBR® Green qPCR Kit

DyNAmo Flash SYBR Green qPCR Kit is a superior kit for SYBR Green-based qPCR. It provides qPCR results faster than conventional SYBR Green kits without compromising the qPCR performance. The high speed and sensitivity of the kit are based on the optimized master mix and a modified DNA polymerase. This unique polymerase incorporates a DNA-binding domain, which improves the physical stability of the polymerase-DNA complex. The high amplification efficiency results in reliable quantitation and early C(t) values. Due to the high signal intensity, DyNAmo Flash SYBR Green qPCR Kit provides an excellent signal-to-noise ratio. It is compatible with all real-time instruments using plastic reaction vessels. For capillary-based instruments, we recommend DyNAmo Capillary SYBR Green qPCR Kit (F-420).

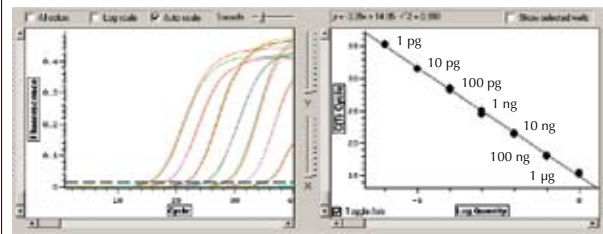
When using RNA as starting material, we recommend DyNAmo cDNA Synthesis Kit (F-470) to ensure high-quality results.

DyNAmo™ Flash Probe qPCR Kit

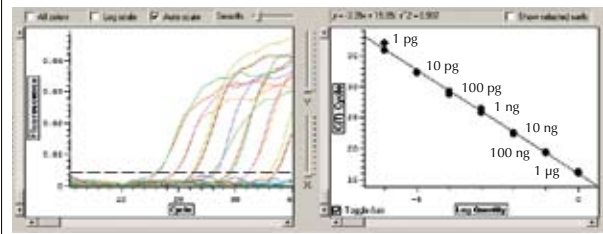
DyNAmo Flash Probe qPCR Kit is the perfect choice for fast probe-based qPCR. The optimized reagents and extremely short cycling times deliver maximum speed, thus increasing sample throughput. Significant time savings are achieved with both conventional and fast real-time PCR instruments. Performance of the DyNAmo Flash Probe qPCR Kit is based on an efficient hot start *Thermus brockianus* DNA polymerase. Sensitivity and the excellent amplification efficiency across a wide range of template concentrations guarantee reproducible results. The DyNAmo Flash Probe qPCR Kit is optimized for hydrolysis probes (e.g., TaqMan probes) and it can be used with both block and capillary-based real-time PCR instruments.

When using RNA as starting material, we recommend DyNAmo cDNA Synthesis Kit (F-470) to ensure high-quality results.

A. DyNAmo™ Flash SYBR® Green qPCR Kit

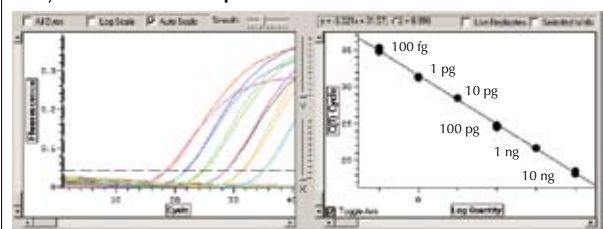


B. Supplier x

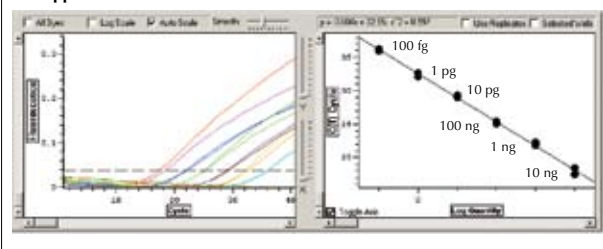


Efficient amplification and high signal intensity with the DyNAmo Flash SYBR Green qPCR Kit. Amplification of a 141 bp cDNA amplicon from human calmodulin gene with DyNAmo Flash SYBR Green qPCR Kit (A: combined annealing and extension 15 s, total cycling time 70 min) and a kit from a major supplier (B: annealing 30 s + extension 30 s, total cycling time 117 min). Reaction and cycling protocols recommended by the suppliers were followed. DyNAmo Flash SYBR Green qPCR Kit delivers efficient amplification and higher signal intensity (note different fluorescence scales in A and B).

A. DyNAmo™ Flash Probe qPCR Kit



B. Supplier x



High amplification efficiency across a broad range of template concentrations. Amplification of a 118 bp amplicon from *Salmonella typhimurium* InvA gene with DyNAmo Flash Probe qPCR Kit (A: combined annealing and extension 15 s, total cycling time 67 min) and a kit from a major supplier (B: combined annealing and extension 1 min, total cycling time 106 min). Reaction setup and cycling were performed as recommended by the suppliers. The results show that DyNAmo Flash Probe qPCR Kit delivers higher amplification efficiency with shorter analysis time.

DyNAmo™ cDNA Synthesis Kit

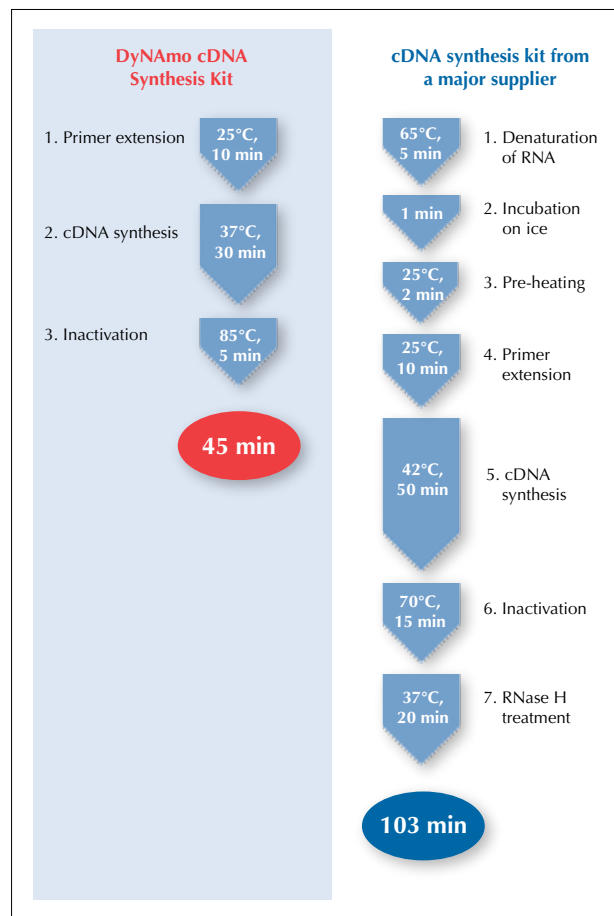
The DyNAmo cDNA Synthesis Kit is optimized for quantitative reverse transcription-PCR (qRT-PCR), where amplicons are usually around 100 bp in length. Reliability and the short, simple protocol make the DyNAmo cDNA Synthesis Kit a perfect match for fast DyNAmo Flash qPCR Kits or any other qPCR kit suitable for the application.

The DyNAmo cDNA Synthesis Kit contains all necessary reagents for quantitative cDNA synthesis from various RNA sources. The reverse transcriptase in the kit is M-MuLV RNase H⁺, which provides higher sensitivity to qPCR than RNase H⁻ reverse transcriptases. Both random and oligo(dT) primers are included in the kit. Either of these or alternatively, gene-specific primers may be used.

Advantages

- Specifically optimized for quantitative RT-PCR
- Broad dynamic range: up to 1 µg of RNA
- Reliable results from different RNA sources: mRNA, total RNA, viral RNA and in vitro transcribed RNA
- Easy to use: short and simple protocol, 2x RT-mix
- Flexible: all priming options for cDNA synthesis

Short and simple protocol



Ordering information

DyNAmo™ Flash SYBR® Green qPCR Kit	
F-415S	40 reactions (50 µl each) or 100 reactions (20 µl each)
F-415L	200 reactions (50 µl each) or 500 reactions (20 µl each)
DyNAmo™ Flash Probe qPCR Kit	
F-455S	40 reactions (50 µl each) or 100 reactions (20 µl each)
F-455L	200 reactions (50 µl each) or 500 reactions (20 µl each)
DyNAmo™ cDNA Synthesis Kit	
F-470S	20 cDNA synthesis reactions (20 µl each)
F-470L	100 cDNA synthesis reactions (20 µl each)

DyNAmo™ Capillary SYBR® Green qPCR Kit	
F-420S	100 reactions (20 µl each)
F-420L	500 reactions (20 µl each)

www.finnzymes.com

For other available DyNAmo qPCR Kits and 2-step qRT-PCR Kits see Finnzymes' catalogue or www.finnzymes.com.

The quality system of Finnzymes Oy is certified according to standard SFS-EN ISO9001:2000.

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