



end-point pcr

DNA POLYMERASES & OTHER PCR ENZYMES

MASTER MIXES

MULTIPLEX MIXES

COMPONENTS/SUPPLEMENTS

strattech.co.uk/nzytech



END-POINT PCR

DNA POLYMERASES & OTHER PCR ENZYMES

NZYTech's DNA polymerases offer great performance expressed by high yields and extreme sensitivity. Each enzyme presents different features to cover a wide range of applications. Thus, we organized enzymes by applications allowing you to direct your selection to the enzymes that most suit your experiment. The Supreme version of each enzyme displays a hot-start-like activity for improved specificity and sensitivity.

	DNA polymerase	Features	Product length	Extension (sec/kb)	Proof reading	Sensitivity*	Product overhang	Cat. No.
Power & Routine	NZYTaq II	High yields with minimal optimization	≤ 6 kb	15-30	No	5 pg	3'-A	MB354
	Supreme NZYTaq II	Hot-start-like version of NZYTaq II	≤ 6 kb	15-30	No	1 pg	3'-A	MB355
	Speedy NZYTaq	Powerful PCR in 30-60 min	≤ 6 kb	5-10 [#]	No	50 pg	3'-A	MB403
	Speedy Supreme NZYTaq	Hot-start-like PCR in 15-60 min	≤ 6 kb	5-10 [#]	No	1 pg	3'-A	MB390
Fidelity	NZYProof	High fidelity proofreading enzyme	≤ 10 kb	60	Yes	5 ng	Blunt	MB146
	Supreme NZYProof	Hot-start-like version of NZYProof	≤ 10 kb	15-30	Yes	1 ng	Blunt	MB283
	Speedy NZYProof	High fidelity PCR in 30-60 min	≤ 2 kb	5	Yes	10 ng	Blunt	MB404
	Speedy Supreme NZYProof	Fast & powerful fidelity PCR	≤ 2 kb	2	Yes	1 ng	Blunt	MB436
Long	NZYLong	Increased processivity for extended PCR	≤ 20 kb	60	No	5 ng	Mixed	MB003
	Supreme NZYLong	Hot-start-like version of NZYLong	≤ 25 kb	60	No	1 ng	Mixed	MB331

*Measures the minimal quantity of human gDNA required to amplify a 1 kb template

[#] For DNA fragments lower than 2kb, use 5 sec/kb

Powerful PCR

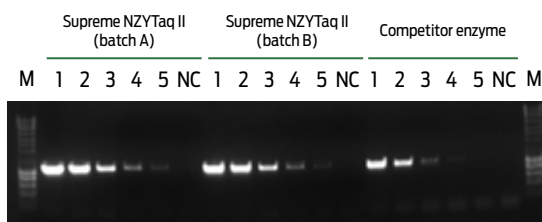
NZYTaq II DNA polymerase	
MB35401	500 U
MB35402	1000 U
MB35403	2500 U

NZYTaq II with 5x Gel Load Reaction Buffer	
MB36401	500 U
MB36402	1000 U
MB36403	2500 U

Supreme NZYTaq II DNA polymerase	
MB35501	500 U
MB35502	1000 U
MB35503	2500 U

Supreme NZYTaq II with 5x Gel Load Buffer	
MB36501	500 U
MB36502	1000 U
MB36503	2500 U

Supreme NZYTaq II DNA polymerase: High sensitivity, reproducibility and performance



Amplification of a 1-kb fragment from human genomic DNA using a 1:5 dilution series ranging from 20 ng to 32 pg.
1) 20 ng; 2) 4 ng; 3) 0.8ng; 4) 0.16 ng; 5) 0.032 ng; NC) No template control; M) NZYDNA Ladder III

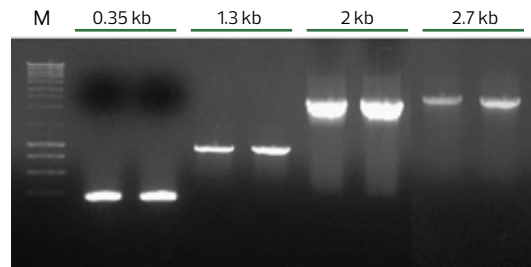
Speedy NZYTaQ DNA polymerase

MB40301	125 U
MB40302	500 U

Speedy Supreme NZYTaQ DNA polymerase

MB39001	500 U
MB39002	1000 U
MB39003	2500 U

Speedy NZYTaQ DNA polymerase: Successful amplification of different-sized targets with limited extension time (5 sec/kb)



High Fidelity PCR

NZYProof DNA polymerase

MB14601	125 U
MB14602	500 U
MB14603	1000 U

Supreme NZYProof DNA polymerase

MB28301	125 U
MB28302	500 U
MB28303	1000 U

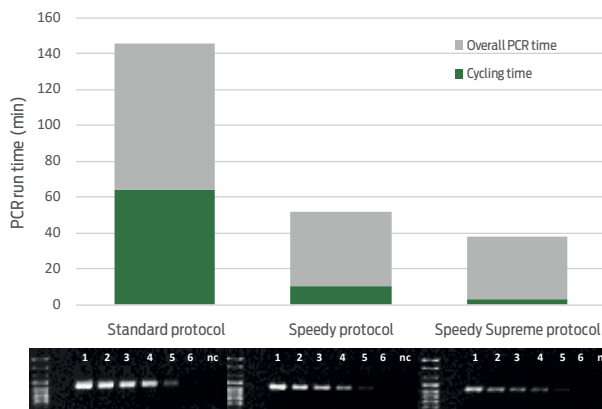
Speedy NZYProof DNA polymerase

MB40401	125 U
MB40402	500 U

Speedy Supreme NZYProof DNA polymerase

MB43601	125 U
MB43602	500 U

Speedy Supreme NZYProof DNA polymerase: The best choice for ultra-rapid fidelity PCRs



Amplification of a 1-kb fragment from human genomic DNA using dilution series ranging from 80 ng to 0.625 ng. The PCR was conducted with **Speedy Supreme NZYProof DNA polymerase** (2.5 U) in a 50 µL final volume in different cycling protocols (standard, speedy and speedy supreme).

The cycling times for each protocol are shown in blue, while the overall PCR times on a Thermal Cycler System with a ramp rate of 4°C/sec are shown in grey. PCR products analysis through agarose gel electrophoresis (1% v/v TAE) is presented below to the chart, using NZYDNA Ladder VIII (Cat. No. MB175); numbers represent the amount of DNA template used.

1) 80 ng; 2) 40 ng; 3) 20ng; 4) 10 ng; 5) 2.5 ng; 6) 0.625 ng; NC) No template control

Long PCR

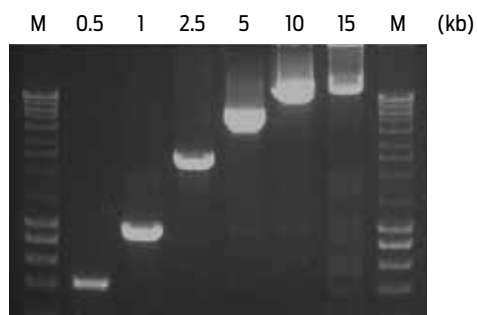
NZYLong DNA polymerase

MB00301	125 U
MB00302	500 U
MB00303	1000 U

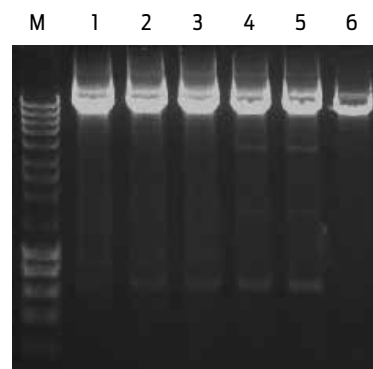
Supreme NZYLong DNA polymerase

MB33101	125 U
MB33102	500 U
MB33103	1000 U

NZYLong DNA polymerase:
Successful amplification of DNA fragments from 0.5 to 15 kb



Supreme NZYLong DNA polymerase:
High sensitivity with large-sized fragments using different amounts of *E. coli* gDNA



1) 40 ng; 2) 20 ng; 3) 10 ng; 4) 5 ng; 5) 2.5 ng; 6) 1.25 ng; M) NZYDNA Ladder III

Other PCR Enzymes



NZY Uracil-DNA Glycosylase

MB44601	100 μ L
MB44602	3 x 100 μ L



NZY Thermolabile Uracil-DNA Glycosylase

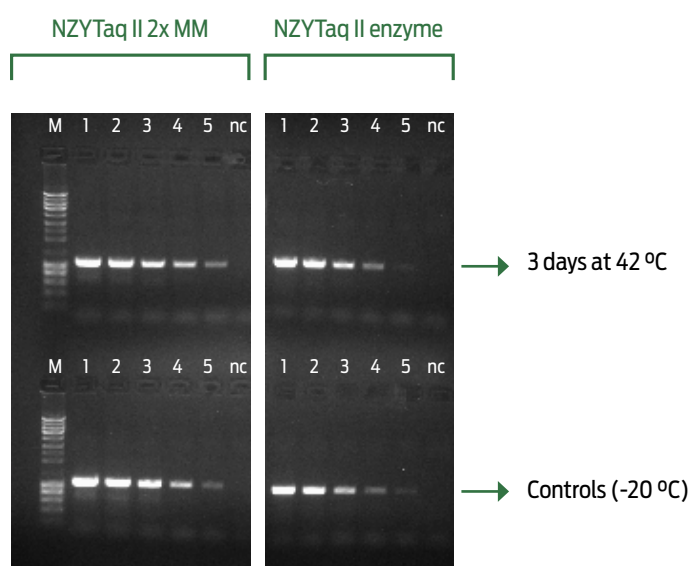
MB44501	100 μ L
MB44502	3 x 100 μ L

MASTER MIXES

NZYTech presents a variety of master mixes containing all PCR components (except primers and template) at optimal concentrations for efficient DNA amplification. Green Master Mixes allow amplification reactions to be directly loaded onto agarose gels. The mixes are formulated in 2x concentrated solutions.

DNA polymerase	Master Mix	Loading dye	Cat. No.
NZYTaq II DNA polymerase	NZYTaq II 2x Green Master Mix	Yes	MB358
	NZYTaq II 2x Colourless Master Mix	No	MB357
Supreme NZYTaq II DNA polymerase	Supreme NZYTaq II 2x Green Master Mix	Yes	MB360
	Supreme NZYTaq II 2x Colourless Master Mix	No	MB359
Speedy NZYTaq DNA polymerase	Speedy NZYTaq 2x Green Master Mix	Yes	MB362
	Speedy NZYTaq 2x Colourless Master Mix	No	MB361
Speedy Supreme NZYTaq DNA polymerase	Speedy Supreme NZYTaq 2x Green Master Mix	Yes	MB391
	Speedy Supreme NZYTaq 2x Colourless Master Mix	No	MB392
NZYProof DNA polymerase	NZYProof 2x Green Master Mix	Yes	MB287
	NZYProof 2x Colourless Master Mix	No	MB288
Supreme NZYProof DNA polymerase	Supreme NZYProof 2x Green Master Mix	Yes	MB285
	Supreme NZYProof 2x Colourless Master Mix	No	MB286
NZYLong DNA polymerase	NZYLong 2x Green Master Mix	Yes	MB139
	NZYLong 2x Colourless Master Mix	No	MB332
Supreme NZYLong DNA polymerase	Supreme NZYLong 2x Green Master Mix	Yes	MB333
	Supreme NZYLong 2x Colourless Master Mix	No	MB334

NZYTaq II DNA polymerase: Robust stability at high temperatures



Activity of NZYTaq II DNA polymerase (individual enzyme and master mix formats) after 3 days at high temperature storage. NZYTaq II DNA polymerase and NZYTaq II 2x Green Master Mix were stored during 3 days at 42 °C. Controls of the same batches were kept at -20 °C. Then, the activity was assayed in a PCR experiment to amplify a 1-kb fragment using as template a dilution series of human genomic DNA (from 20 ng to 32 pg); numbers represent the amount of DNA template used (1: 20 ng; 2: 4 ng; 3: 0.8ng; 4: 0.16 ng; 5: 0.032 ng; nc: negative control without DNA). M: NZYDNA Ladder III (Cat. No. MB044)

NZYTaq II-based master mixes

NZYTaq II 2x Green Master Mix

MB35801	500 U (100 x 50 µL rxs)
MB35802	1000 U (200 x 50 µL rxs)
MB35803	5000 U (1000 x 50 µL rxs)

NZYTaq II 2x Colourless Master Mix

MB35701	500 U (100 x 50 µL rxs)
MB35702	1000 U (200 x 50 µL rxs)
MB35703	5000 U (1000 x 50 µL rxs)

Supreme NZYTaq II-based master mixes

Supreme NZYTaq II 2x Green Master Mix

MB36001	500 U (100 x 50 µL rxs)
MB36002	1000 U (200 x 50 µL rxs)
MB36003	5000 U (1000 x 50 µL rxs)

Supreme NZYTaq II 2x Colourless Master Mix

MB35901	500 U (100 x 50 µL rxs)
MB35902	1000 U (200 x 50 µL rxs)
MB35903	5000 U (1000 x 50 µL rxs)

Speedy Supreme NZYTaq-based master mixes

Speedy Supreme NZYTaq 2x Green MM

MB39101	500 U (100 x 50 µL rxs)
MB39102	1000 U (200 x 50 µL rxs)
MB39103	5000 U (1000 x 50 µL rxs)

Speedy Supreme NZYTaq 2x Colourless MM

MB39201	500 U (100 x 50 µL rxs)
MB39202	1000 U (200 x 50 µL rxs)
MB39203	5000 U (1000 x 50 µL rxs)

Speedy NZYTaq-based Master Mixes

Speedy NZYTaq 2x Green Master Mix

MB36201	500 U (100 x 50 µL rxs)
MB36202	1000 U (200 x 50 µL rxs)
MB36203	5000 U (1000 x 50 µL rxs)

Speedy NZYTaq 2x Colourless Master Mix

MB36101	500 U (100 x 50 µL rxs)
MB36102	1000 U (200 x 50 µL rxs)
MB36103	5000 U (1000 x 50 µL rxs)

NZYProof-based master mixes

NZYProof 2x Green Master Mix

MB28701	500 U (100 x 50 µL rxs)
MB28702	1000 U (200 x 50 µL rxs)
MB28703	5000 U (1000 x 50 µL rxs)

NZYProof 2x Colourless Master Mix

MB28801	500 U (100 x 50 µL rxs)
MB28802	1000 U (200 x 50 µL rxs)
MB28803	5000 U (1000 x 50 µL rxs)



Supreme NZYProof-based master mixes

Supreme NZYProof 2x Green Master Mix

MB28501	500 U (100 x 50 µL rxs)
MB28502	1000 U (200 x 50 µL rxs)
MB28503	5000 U (1000 x 50 µL rxs)

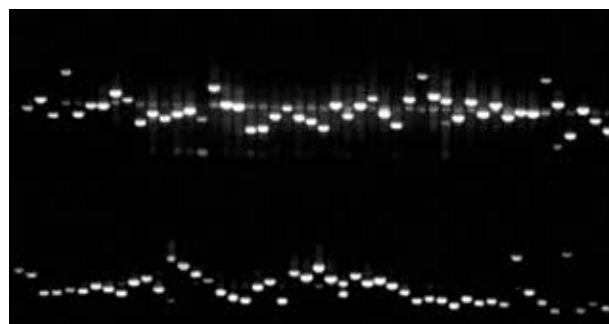
Supreme NZYProof 2x Colourless Master Mix

MB28601	500 U (100 x 50 µL rxs)
MB28602	1000 U (200 x 50 µL rxs)
MB28603	5000 U (1000 x 50 µL rxs)

NZYLong 2x Green Master Mix:

Convenience of direct gel loading of different-sized PCR products in a high-throughput PCR experiment (96 amplifications)

Green Master Mixes offer convenience in colony PCR and high-throughput applications



NZYLong-based master mixes

NZYLong 2x Green Master Mix

MB13902	500 U (100 x 50 µL rxs)
MB13903	1000 U (200 x 50 µL rxs)
MB13904	5000 U (1000 x 50 µL rxs)

NZYLong 2x Colourless Master Mix

MB33201	500 U (100 x 50 µL rxs)
MB33202	1000 U (200 x 50 µL rxs)
MB33203	5000 U (1000 x 50 µL rxs)

Supreme NZYLong-based master mixes

Supreme NZYLong 2x Green Master Mix

MB33301	500 U (100 x 50 µL rxs)
MB33302	1000 U (200 x 50 µL rxs)
MB33303	5000 U (1000 x 50 µL rxs)

Supreme NZYLong 2x Colourless Master Mix

MB33401	500 U (100 x 50 µL rxs)
MB33402	1000 U (200 x 50 µL rxs)
MB33403	5000 U (1000 x 50 µL rxs)



MULTIPLEX MIXES

NZYTech developed two PCR master mixes based on our non-proofreading and proofreading enzymes for the simultaneous amplification of multiple DNA fragments (up to 15 targets) in a single tube. The mixes are provided in 2x concentrated solutions, in green (direct-gel load) and colourless versions.

Multiplex PCR NZYTaq 2x Green Master Mix

MB33501	500 U (100 x 50 µL rxs)
MB33502	1000 U (200 x 50 µL rxs)
MB33503	5000 U (1000 x 50 µL rxs)

Multiplex PCR NZYTaq 2x Colourless MM

MB33601	500 U (100 x 50 µL rxs)
MB33602	1000 U (200 x 50 µL rxs)
MB33603	5000 U (1000 x 50 µL rxs)

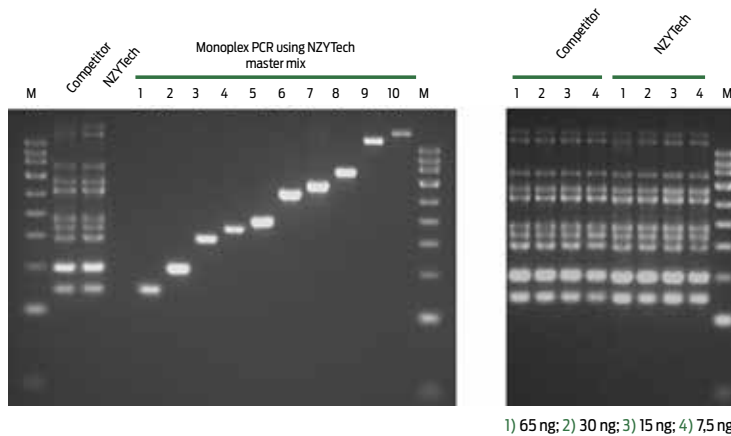
Multiplex PCR NZYProof 2x Green Master Mix

MB33701	500 U (100 x 50 µL rxs)
MB33702	1000 U (200 x 50 µL rxs)

Multiplex PCR NZYProof 2x Colourless MM

MB33801	500 U (100 x 50 µL rxs)
MB33802	1000 U (200 x 50 µL rxs)

Multiplex PCR NZYTaq 2x Green Master Mix:
High performance in a multiplex PCR reaction amplifying 10 different fragments from human genomic DNA



COMPONENTS/SUPPLEMENTS

dNTPs

dNTPs NZYSet

MB08701	100 mM (4 x 0.25 mL)
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dNTPs NZYMix

MB08601	25 mM each, 1 mL
MB08602	25 mM each, 5 mL
MB08603	10 mM each, 0.2 mL
MB08604	10 mM each, 1 mL
MB08605	10 mM each, 5 mL

PCR Supplements

NZYTech supplements are available to optimize PCR conditions with NZYTaq II DNA polymerase.

NZYTaq 5x Optimizer Solution

MB06001	1 mL
MB06002	3 x 1 mL

NZYTaq 2x GC-Enhancer Solution

MB14301	1 mL
MB14302	5 x 1 mL

