Mix PCR 3
(10 mM of dATP, dGTP, dCTP, dTTP)

Ready-to-use dNTP mixture for :

- UptiTherm DNA Polymerase
- Taq DNA polymerase [1].

pH : 7.0
Purity >98%

Mix PCR 4
(10 mM of dATP, dGTP, dCTP, dUTP)

Ready-to-use dNTP mixture for :

- UptiTherm DNA Polymerase
- Taq DNA polymerase [1].

pH : 7.0
Purity >98%

Mix Seq T - Termination mixture
Ready-to-use dNTP/ddNTP Set for UptiTherm DNA Polymerase and Taq DNA Polymerase

Description	Cat.#	Qty
20 µM dATP, dCTP, dGTP, dTTP (of each), 350 µM ddATP	**UP984470**	0.3 ml
20 µM dATP, dCTP, dGTP, dTTP (of each), 350 µM ddTTP	**UP984510**	0.3 ml
20 µM dATP, dCTP, dGTP, dTTP (of each), 350 µM ddGTP	**UP984520**	0.3 ml
20 µM dATP, dCTP, dGTP, dTTP (of each), 350 µM ddCTP	**UP984530**	0.3 ml

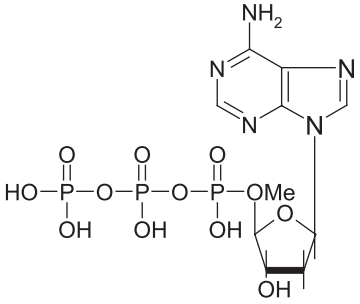
Purity : > 98%
pH : 7.0

Applications :
Termination mixture ddATP, ddTTP, ddGTP, and ddCTP are provided in four differents coloured vials respectively as : red, green, yellow and blue.

Description	Cat.#	Qty
Mix PCR 1 (2mM of dATP, dGTP, dCTP, dTTP)	**UP926890**	1 ml
	UP926891	5 x 1 ml
Mix PCR 3 (10mM of dATP, dGTP, dCTP, dTTP)	**UP984440**	0.2 ml
	UP984441	5 x 0.2 ml
Mix PCR 4 (10mM of dATP, dGTP, dCTP, dUTP)	**UP984450**	0.2 ml
	UP984451	5 x 0.2 ml
Mix Seq T - Termination mixture	**UP996780**	4 x 0.3 ml

Deoxynucleotides standards

dATP-Na_4, 2´ -Deoxyadenosine 5´ -triphosphate, tetrasodium salt
(25 µmol in solution 100 mM, pH 7.0)



$C_{10}H_{12}N_5O_{12}P_3Na_4$
CAS [1927-31-7]
MW 579.13
Absorbance max. : 259 nm (pH 7)
$\varepsilon_{maxabs.}$: 15 $mmol^{-1}\,cm^{-1}$
Purity : > 98 %

Applications :
dATP is used as a substrate for sequencing DNA by the method of Sanger.[1,2]
dATP is used as a substrate for PCR.[3,4]

Description	Cat.#	Qty
dATP-Na_4	**UP314671**	25 µmol

Literature :
1. Burd, J.F., Wells, R.D., J.Mol.Biol., 53 :435 (1970) ; 2. Sanger, F. et al., Proc. Natl. Acad. Sci. USA, 74 :5463 (1977)
3. Mullis, K.B. and Faloona, F.A., Methods Enzymol. 155 :335 (1987) ; 4. Newton, C.R. and Graham, A., PCR Spectrum Akad. Verlag Heidelberg (1997)

dGTP-Na$_4$, 2´-Deoxyguanosine 5´-triphosphate, tetrasodium salt

(25 µmol in solution 100 mM, pH 7.0)

$C_{10}H_{12}N_5O_{13}P_3Na_4$

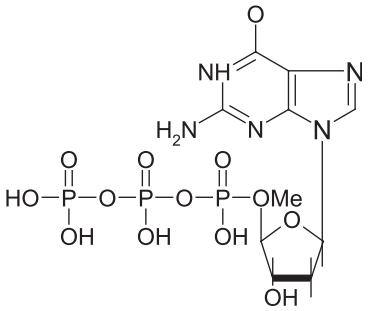
CAS [93919-41-6]

MW : 595.18

Absorbance max. : 252 nm (pH 7)

$\varepsilon_{maxabs.}$: 13.7 mmol^{-1} cm^{-1}

Purity : > 98 %



Description	Cat.#	Qty
dGTP-Na$_4$	**UP982151**	25 µmol

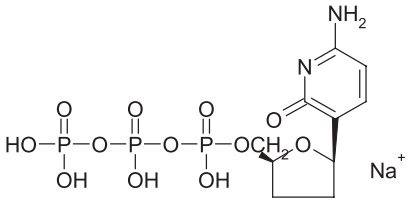
dCTP-Na$_4$, 2´- Deoxycytidine 5´ -triphosphate, tetrasodium salt

(25 µmol in solution 100 mM, pH 7.0)

Absorbance max. : 267 nm (pH 7)

$\varepsilon_{maxabs.}$: 9.6 mmol^{-1} cm^{-1}

Purity : > 98 %



Description	Cat.#	Qty
dCTP-Na$_4$	**UP314781**	25 µmol

dUTP-Na$_4$, 2´-Deoxyuridine 5´-triphosphate, tetrasodium salt

(25 µmol in solution 100 mM, pH 7.0)

$C_9H_{11}N_2O_{14}P_3Na_4$

CAS [102814-08-4]

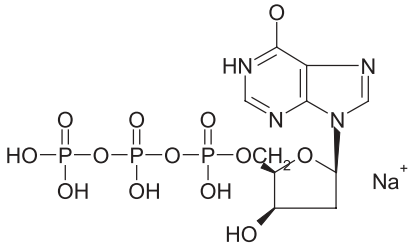
MW : 556.10

Absorbance max. : 262 nm (pH 7)

$\varepsilon_{maxabs.}$: 10.2 mmol^{-1} cm^{-1}

Purity : > 98 %

Store at -20°C



Description	Cat.#	Qty
dUTP-Na$_4$	**UP636831**	25 µmol

dUDP, 2'-Deoxy-uridine-5'-diphosphate, Triethylammonium salt

$C_9H_{12}N_2O_{11}P_2$ (Anion)

MW : 386.14 (Anion)

Purity : > 95 %

Description	Cat.#	Qty
dUDP	**FQ2021**	150 u
	FQ2020	750 u

dITP-Na$_4$, 2´ - Deoxyinosine 5´ -triphosphate, tetrasodium salt

(25 µmol in solution 100 mM, pH 7.0)

$C_{10}H_{11}N_4O_{13}P_3Na_4$

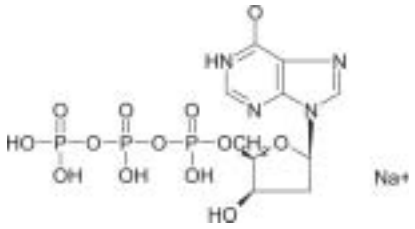
CAS [95648-77-4]

MW : 580.10

Absorbance max. : 249 nm (pH 7)

$\varepsilon_{maxabs.}$: 12.2 mmol^{-1} cm^{-1}

Purity : > 98 %



Description	Cat.#	Qty
dITP-Na$_4$	**UP637564**	25 µmol

Dideoxynucleotides

ddNTP Set

ddNTPs are used as substrates for sequencing DNA by method of Sanger[1,2].

Literature : (1) Sanger, F., Nicklen, S., and Coulson, A.R, Proc.Natl.Acad. Sci. USA, 74, 5463 (1977)
(2) Biggin, M.D., Gibson, T.G., and Hong, G.F., Proc.Natl.Acad.Sci. USA, 80, 3963 (1983)

	ddATP-Li$_4$	ddGTP-Li$_4$	ddCTP-Li$_4$	ddTTP-Li$_4$
Formula	$C_{10}H_{12}N_5O_{11}P_3Li_4$	$C_{10}H_{12}N_5O_{12}P_3Li_4$	$C_9H_{12}N_3O_{12}P_3Li_4$	$C_{10}H_{13}N_2O_{13}P_3Li_4$
Molecular Weight	498.93 g/mol	514.93 g/mol	474.90 g/mol	489.91 g/mol
λ max (pH 7.0)	260 nm	252 nm	272 nm	267 nm
$\varepsilon_{maxabs.}$	15.3 mmol^{-1} cm^{-1}	13.7 mmol^{-1} cm^{-1}	9.6 mmol^{-1} cm^{-1}	9.5 mmol^{-1} cm^{-1}
Concentration	10 mM	10 mM	10 mM	10 mM
Amount	1 µmol	1 µmol	1 µmol	1 µmol
pH of solution	7.0	7.0	7.0	7.0
Purity	> 98%	> 98%	> 98%	> 98%

Description	Cat.#	Qty
ddATP	**UP638400**	1 µmol
ddGTP	**UP638000**	1 µmol
ddCTP	**UP637520**	1 µmol
ddTTP	**UPA13250**	1 µmol
ddNTP Set	**UP968620**	4 x 1 µmol

Dideoxynucleotides standards

ddATP , 2´, 3´ -Dideoxyadenosine 5' -triphosphate, tetralithium salt

ddATP-Li_4
$C_{10}H_{12}N_5O_{11}P_3Li_4$
MW : 498.93
Solution at 10 mM, pH 7.0
absorbance max. : 260 nm (pH 7)
$\varepsilon_{maxabs.}$: 15. $mmol^{-1}\,cm^{-1}$
Purity : > 98 %
Applications :
ddATP is used as a substrate for sequencing DNA by the method of Sanger.

Description	Cat.#	Qty
ddATP, 1 umol in solution	**UP638400**	100 µl (1 µmol)

ddGTP, 2´, 3´ -Dideoxyguanosine 5' -triphosphate, tetralithium salt

ddGTP-Li_4
$C_{10}H_{12}N_5O_{12}P_3Li_4$
MW : 514.93
Solution at 10 mM, pH 7.0
absorbance max. : 252 nm (pH 7)
$\varepsilon_{maxabs.}$: 13.7 $mmol^{-1}\,cm^{-1}$
Purity : > 98 %
Applications :
Incorporation of ddGTP by DNA polymerases onto the 3'-hydroxyl of the extending transcript inhibits further extension. This principle is used in DNA sequencing.

Description	Cat.#	Qty
ddGTP	**UP638000**	100 µl (1 µmol)

ddCTP, 2´, 3´ -Dideoxycytidine 5' -triphosphate, tetralithium salt

ddCTP-Li_4
$C_9H_{12}N_3O_{12}P_3Li_4$
MW : 474.90
Solution at 10 mM, pH 7.0
absorbance max. : 252 nm (pH 7)
$\varepsilon_{maxabs.}$: 13.7 $mmol^{-1}\,cm^{-1}$
Purity : > 98 %
Applications :
Incorporation of ddGTP by DNA polymerases onto the 3'-hydroxyl of the extending transcript inhibits further extension. This principle is used in DNA sequencing.

Description	Cat.#	Qty
ddCTP	**UP637520**	100 µl (1 µmol)

ddTTP, 2´, 3´ -Dideoxythymidine 5' -triphosphate, tetralithium salt

ddTTP-Li_4
$C_{10}H_{13}N_2O_{13}P_3Li_4$
MW : 489.91
Solution at 10 mM, pH 7.0
absorbance max. : 267 nm (pH 7)
$\varepsilon_{maxabs.}$: 9.5 $mmol^{-1}\,cm^{-1}$
Purity : > 98 %
Applications :
Incorporation of ddGTP by DNA polymerases onto the 3'-hydroxyl of the extending transcript inhibits further extension. This principle is used in DNA sequencing.

Description	Cat.#	Qty
ddCTP	**UPA13250**	100 µl (1 µmol)

Optimization kits

PCR Optimization Kits provide different buffer systems and different thermostable DNA Polymerases for easy and simple optimization of individual template primer pair combinations. All 2X PreMixes contain a buffer system, all four deoxynucleotides and different amounts of $MgCl_2$ (0-7 mM). In some of the 2X PreMixes Magic Solution is included. Magic Solution is a PCR enhancer that substantially improves the yield and specificity of many amplified target sequences, especially those containing a high G-C content or secondary structure.

PCR Optimization kit 1

PCR Optimization kit 1 with Ammonium Buffer is for optimization of template-primer combination with different MgCl2 concentrations in the 2X Pre-Mixes, with or without Magic Solution. Taq DNA Polymerase and the Proof-Reading AccuPOL DNA Polymerase are included. For targets that require increased sensitivity we have included the UniPOL-Long Range PCR system.

Description	Cat.#	Qty
PCR Optimization Kit 1, Ammonium Buffer	**BM4390**	20 Templates
	BM4391	60 Templates

PCR Optimization kit 2

PCR Optimization kit 2 with Standard Buffer is for optimization of tem-plate-primer combination with different $MgCl_2$ concentration in the 2X Pre-Mixes, with or without Magic Solution. For targets that require increased sensitivity we have included the Taq DNA Polymerase together with the Uni-POL-Long Range PCR system.

Description	Cat.#	Qty
PCR Optimization Kit 2, Standard Buffer	**BM4400**	20 Templates
	BM4401	60 Templates

Related products :

Description	Cat.#
PCR/MPCR Optimizer Kit	**T56740**
Hot Start PCR Optimization Kit 1, TEMPase Buffer I and Buffer II	**BM4410**

Amplification Products for PCR and RT-PCR

Optimization kits

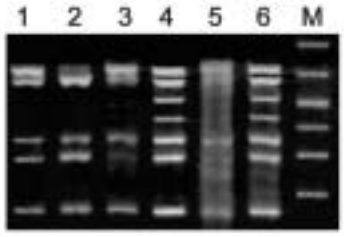
Hot Start Optimization kit 1

Hot Start Optimization kit 1 provides two buffer systems for easy and simple optimization of individual template-primer pair combinations. The 2X Pre-Mixes contain either the Ammonium buffer system or the new buffer system with balanced Ammonium and Potassium. The TEMPase Hot Start DNA Poly-merase is included in the kit.

Description	Cat.#	Qty
Hot Start PCR Optimization Kit 1,	**BM4410**	20 Templates
TEMPase Buffer I and Buffer II	**BM4411**	60 Templates

Optimization Kit : PCR/MPCR Optimizer Kit

The MPCR Optimizer Kit is the first research kit used to optimize multiplex PCR with high specificity. The 6 MPCR Buffers provided in the kit ensure that your MPCR is optimized in hours. The kit has been used to amplify up to 18 DNA fragments from genomic DNA simultaneously. Multiplex RT-PCR can also be optimized by using this kit in combination with the RT kit. With the positive control and primers provided, this kit will yield the DMD exons 3 (410 bp), 6 (202 bp), 13 (238 bp), 43 (357 bp), 47 (181 bp), 50 (271 bp), 52 (113 bp), 60 (139 bp) and the muscle-specific promoter (535 bp) of the dystrophin gene. PCR products may be visible on a 1.5% agarose gel as described in the protocol included with the kit.



Optimization of multiplex PCR of the Inflammation-related Cytokines (FPR, TNF-a, IL-1b, GM-CSF, IL-6, IL-8 and TGF-b) using the MPCR Optimizer Kit. MPCR Buffers 1-6 (Lanes 1-6) were used to obtain the optimal condition (MPCR Buffer 4 & Buffer 6) for this Multiplex PCR. M: GelMarkerTM.

Summary of genes included in each individual MPCR kit :

	DMD exon 3	DMD exon 6	DMD exon 13	DMD exon 43	DMD exon 47	DMD exon 50	DMD exon 52	DMD exon60	DMD promoter
T56740	+	+	+	+	+	+	+	+	+

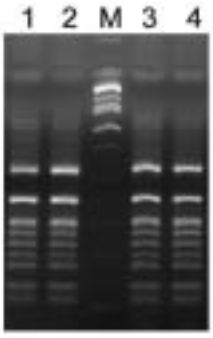
Description	Cat.#	Qty
PCR/MPCR Optimizer Kit-I	**T56740**	50 tests

High-GC PCR/MPCR Optimizer Kit

The EZ-GCAmp™ High-GC PCR/MPCR Optimizer Kit is the second generation of MPCR Optimizer kit, which is specially designed to optimize high GC-template PCR/MPCR. The GC-Normaliser™ and DMSO are used to help DNA strand separation and polymerase reaction through GC-rich region.

Feature :

- Amplify virtually all sequences with up to 90% GC
- Minimal Optimization
- High GC PCR & MPCR Optimization in a single kit



Lane M : DNA M.W Marker
Lane 1-4 : PCR using DMD-P002 Primers with different blood DNA samples

Summary of genes included in each individual MPCR kit :

	P16 gene exon 1	P16 gene exon 1	MTS2 gene
T56750	+	+	+

Description	Cat.#	Qty
PCR/MPCR Optimizer Kit-I	**T56740**	50 tests

Kit components	Optimizer Kit-I	Optimizer Kit-II
MPCR Buffer 1 to 6	X	X
MPCR Buffer 7 to 9		X
GC normalizer		X
DMSO		X
MPCR primers	X	X
Positive control	X	X
Sterile ddH_2O	X	X