



Certificate of Analysis

COA No: CA BN-0006

Version: 04

dATP 100mM

For Research Use Only

Storage Conditions: -20°C

Lot number: DA-617106

Expiry date: July 2019

Quality Control Parameters

2'-deoxyadenosine-5'-triphosphate



MW = 514.916 g /mol

Certified <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates

Characteristics	Specification	Result
Concentration (at λ_{max} , pH 7.0, $\epsilon = 15.4 \text{ E} \times \text{mmol}^{-1} \times \text{cm}^{-1}$)	100 mM \pm 5%	103.5mM
pH of Solution(at 20°C)	7.5 – 8.0	7.50 @ 19.8°C
λ_{max} (at pH 7.0)	259 \pm 1 nm	259.5 nm
A250/A260	0.78 \pm 0.03	0.78
A280/A260	0.15 \pm 0.02	0.14
Purity dATP (HPLC Area % at λ_{max})	\geq 99%	99.7%
dNDP + dNMP (HPLC Area % at λ_{max})	<1%	Passed
Appearance	Clear colourless solution	Passed

United Kingdom
Headquarters UK

USA

Germany

France

Australia

Singapore

info.uk@bioline.com

Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

info.us@bioline.com

Tel: +1 508 880 8990
Fax: +1 508 880 8993

info.de@bioline.com

Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

Info.fr@bioline.com

Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

info.aust@bioline.com

Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Info.sg@bioline.com

Tel: +65 6774 7196
Fax: +65 6774 6441



Certificate of Analysis

COA No: CA BN-0006

Version: 04

Analysis	Specification	Result
Functional	A 3Kb Lambda DNA fragment is amplified with a dilution series of dATP, using standard conditions and 30 cycles. Single distinct bands were observed with agarose gel electrophoresis (ethidium stained).	Passed
DNA contamination	Quantitative PCR analysis with no template. Presence of <i>E. coli</i> and mouse genomic DNA checked. Test sample must amplify in line with a reference sample.	Passed
DNase / RNase / Nicking Activity	Incubation of a 1Kb double stranded DNA fragment. Incubation for 4 hours at 37°C with dilution series of DNase I. Analysed by agarose gel electrophoresis. Test sample must show less degradation than the limit of detection 2.5×10^{-3} U DNase.	Passed
	Quantitative PCR analysis with high and low RNase standards. Test sample must show less RNase activity than the limit of detection 9.7×10^{-3} ng/ μ L RNase.	Passed
	Incubation of dATP with supercoiled control plasmid. Analysed by agarose gel electrophoresis. Test sample does not show an increase of linearized or relaxed plasmid.	Passed

Authorised by Christopher Weatherall

United Kingdom
Headquarters UK

info.uk@bioline.com
Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

USA

info.us@bioline.com
Tel: +1 508 880 8990
Fax: +1 508 880 8993

Germany

info.de@bioline.com
Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

France

info.fr@bioline.com
Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

Australia

info.aust@bioline.com
Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Singapore

Info.sg@bioline.com
Tel: +65 6774 7196
Fax: +65 6774 6441



Certificate of Analysis

COA No: CA BN-0007

Version: 04

dCTP 100mM

For Research Use Only

Storage Conditions: -20°C

Lot number: DC-617106

Expiry date: July 2019

Quality Control Parameters

2'-deoxycytidine-5'-triphosphate



MW = 490.891 g /mol

Certified <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates

Characteristics	Specification	Result
Concentration (at λ_{max} , pH 7.0, $\epsilon = 9.1 \text{ E} \times \text{mmol}^{-1} \times \text{cm}^{-1}$)	100 mM \pm 5%	102.1
pH of Solution(at 20°C)	7.5 – 8.0	7.50 @ 19.9°C
λ_{max} (at pH 7.0)	272 \pm 1 nm	271
A250/A260	0.82 \pm 0.03	0.80
A280/A260	0.98 \pm 0.03	0.97
Purity dCTP (HPLC Area % at λ_{max})	\geq 99%	>99.8
dNDP + dNMP (HPLC Area % at λ_{max})	<1%	Passed
Appearance	Clear colourless solution	Passed

United Kingdom
Headquarters UK

USA

Germany

France

Australia

Singapore

info.uk@bioline.com

Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

info.us@bioline.com

Tel: +1 508 880 8990
Fax: +1 508 880 8993

info.de@bioline.com

Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

Info.fr@bioline.com


Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

info.aust@bioline.com

Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Info.sg@bioline.com

Tel: +65 6774 7196
Fax: +65 6774 6441

	<h2>Certificate of Analysis</h2>	COA No: CA BN-0007
		Version: 04

Analysis	Specification	Result
Functional	A 3Kb Lambda DNA fragment is amplified with a dilution series of dCTP, using standard conditions and 30 cycles. Single distinct bands were observed with agarose gel electrophoresis (ethidium stained).	Passed
DNA contamination	Quantitative PCR analysis with no template. Presence of <i>E. coli</i> and mouse genomic DNA checked. Test sample must amplify in line with a reference sample.	Passed
DNase / RNase / Nicking Activity	Incubation of a 1Kb double stranded DNA fragment. Incubation for 4 hours at 37°C with dilution series of DNase I. Analysed by agarose gel electrophoresis. Test sample must show less degradation than the limit of detection 2.5×10^{-3} U DNase.	Passed
	Quantitative PCR analysis with high and low RNase standards. Test sample must show less RNase activity than the limit of detection 9.7×10^{-3} ng/ μ L RNase.	Passed
	Incubation of dCTP with supercoiled control plasmid. Analysed by agarose gel electrophoresis. Test sample does not show an increase of linearized or relaxed plasmid.	Passed

Authorised by Christopher Weatherall



United Kingdom
Headquarters UK

info.uk@bioline.com
Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

USA

info.us@bioline.com
Tel: +1 508 880 8990
Fax: +1 508 880 8993

Germany

info.de@bioline.com
Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

France

info.fr@bioline.com
Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

Australia

info.aust@bioline.com
Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Singapore

Info.sg@bioline.com
Tel: +65 6774 7196
Fax +65 6774 6441



Certificate of Analysis

COA No: CA BN-0008

Version: 04

dGTP 100mM

For Research Use Only

Storage Conditions: -20°C

Lot number: DG-517206

Expiry date: July 2019

Quality Control Parameters

2'-deoxyguanosine-5'-triphosphate



MW = 530.916 g / mol

Certified <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates

Characteristics	Specification	Result
Concentration (at λ_{max} , pH 7.0, $\epsilon = 13.7 \text{ E x mmol}^{-1} \text{ x cm}^{-1}$)	100 mM \pm 5%	101.8mM
pH of Solution(at 20°C)	7.5 – 8.0	7.5 @ 20.2°C
λ_{max} (at pH 7.0)	252 \pm 1 nm	252.5 nm
A250/A260	1.16 \pm 0.05	1.17
A280/A260	0.66 \pm 0.03	0.67
dNTP (HPLC Area % at λ_{max})	\geq 99%	>99.7%
dNDP + dNMP (HPLC Area % at λ_{max})	<1%	Passed
Appearance	Clear colourless solution	Passed

United Kingdom
Headquarters UK

USA

Germany

France

Australia

Singapore

info.uk@bioline.com

Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

info.us@bioline.com

Tel: +1 508 880 8990
Fax: +1 508 880 8993

info.de@bioline.com

Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

Info.fr@bioline.com


Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

info.aust@bioline.com

Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Info.sg@bioline.com

Tel: +65 6774 7196
Fax +65 6774 6441

	<h2>Certificate of Analysis</h2>	COA No: CA BN-0008
		Version: 04

Analysis	Specification	Result
Functional	A 3Kb Lambda DNA fragment is amplified with a dilution series of dGTP, using standard conditions and 30 cycles. Single distinct bands were observed with agarose gel electrophoresis (ethidium stained).	Passed
DNA contamination	Quantitative PCR analysis with no template. Presence of <i>E. coli</i> and mouse genomic DNA checked. Test sample must amplify in line with a reference sample.	Passed
DNase / RNase / Nicking Activity	Incubation of a 1Kb double stranded DNA fragment. Incubation for 4 hours at 37°C with dilution series of DNase I. Analysed by agarose gel electrophoresis. Test sample must show less degradation than the limit of detection 2.5×10^{-3} U DNase.	Passed
	Quantitative PCR analysis with high and low RNase standards. Test sample must show less RNase activity than the limit of detection 9.7×10^{-3} ng/ μ L RNase.	Passed
	Incubation of dGTP with supercoiled control plasmid. Analysed by agarose gel electrophoresis. Test sample does not show an increase of linearized or relaxed plasmid.	Passed

Authorised by Christopher Weatherall



United Kingdom
Headquarters UK

info.uk@bioline.com
Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

USA

info.us@bioline.com
Tel: +1 508 880 8990
Fax: +1 508 880 8993

Germany

info.de@bioline.com
Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

France

info.fr@bioline.com
Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

Australia

info.aust@bioline.com
Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Singapore

Info.sg@bioline.com
Tel: +65 6774 7196
Fax: +65 6774 6441



Certificate of Analysis

COA No: CA BN-0009

Version: 04

dTTP 100mM

For Research Use Only

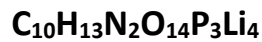
Storage Conditions: -20°C

Lot number: DT-517206

Expiry date: July 2019

Quality Control Parameters

2'-deoxythymidine-5'-triphosphate



MW = 505.903 g/mol

Certified <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates

Characteristics	Specification	Result
Concentration (at λ_{max} , pH 7.0, $\epsilon = 9.5 \text{ E} \times \text{mmol}^{-1} \times \text{cm}^{-1}$)	100 mM \pm 5%	103.9mM
pH of Solution(at 20°C)	7.5 – 8.0	7.51@18.3°C
λ_{max} (at pH 7.0)	267 \pm 1 nm	267.5nm
A250/A260	0.65 \pm 0.03	0.64
A280/A260	0.73 \pm 0.02	0.74
Purity dTTP (HPLC Area % at λ_{max})	\geq 99%	>99.8%
dNDP + dNMP (HPLC Area % at λ_{max})	<1%	Passed
Appearance	Clear colourless solution	Passed

United Kingdom
Headquarters UK

USA

Germany

France

Australia

Singapore

info.uk@bioline.com

Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

info.us@bioline.com

Tel: +1 508 880 8990
Fax: +1 508 880 8993

info.de@bioline.com

Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

Info.fr@bioline.com

Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

info.aust@bioline.com

Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Info.sg@bioline.com

Tel: +65 6774 7196
Fax +65 6774 6441



Certificate of Analysis

COA No: CA BN-0009

Version: 04

Analysis	Specification	Result
Functional	A 3Kb Lambda DNA fragment is amplified with a dilution series of dTTP, using standard conditions and 30 cycles. Single distinct bands were observed with agarose gel electrophoresis (ethidium stained).	Passed
DNA contamination	Quantitative PCR analysis with no template. Presence of <i>E. coli</i> and mouse genomic DNA checked. Test sample must amplify in line with a reference sample.	Passed
DNase / RNase / Nicking Activity	Incubation of a 1Kb double stranded DNA fragment. Incubation for 4 hours at 37°C with dilution series of DNase I. Analysed by agarose gel electrophoresis. Test sample must show less degradation than the limit of detection 2.5×10^{-3} U DNase.	Passed
	Quantitative PCR analysis with high and low RNase standards. Test sample must show less RNase activity than the limit of detection 9.7×10^{-3} ng/ μ L RNase.	Passed
	Incubation of dTTP with supercoiled control plasmid. Analysed by agarose gel electrophoresis. Test sample does not show an increase of linearized or relaxed plasmid.	Passed

Authorised by Christopher Weatherall

United Kingdom
Headquarters UK

info.uk@bioline.com
Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

USA

info.us@bioline.com
Tel: +1 508 880 8990
Fax: +1 508 880 8993

Germany

info.de@bioline.com
Tel: +49 (0)3371 681 229
Fax: +49 (0)3371 681 244

France

info.fr@bioline.com
Tel: +33 (0)1 42 56 04 40
Fax: +33 (0)9 70 06 62 10

Australia

info.aust@bioline.com
Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763

Singapore

Info.sg@bioline.com
Tel: +65 6774 7196
Fax +65 6774 6441