PRODUCT CATALOG

BIOATLAS *Science of Life*

DEAR FRIENDS,

You are holding in your hands our 10th Anniversary catalog. We are very happy that you have stayed with us for more than a decade now. It has been an incredible journey for us and hopefully we have had an opportunity to share a bit of that also with you. The biggest news in this catalog is our Atlas ClearSight Tablets. Our DNA Stain which is used for many years by hundreds of labs around the world became a tablet. It is integrated into a tablet along with the agarose and TBE buffer. It is our first product in tablet form in order to make your life easier and safer.

All the best,

Lauri Koorits
CEO

Content

To place an order, please contact your local distributor.

PCR & qPCR
DNA Polymerases

Atlas Taq DNA Polymerase

APPLICATIONS:

- Polymerase chain reaction (PCR).
- Primer extension.
- DNA sequencing.

DESCRIPTION:

Atlas Taq DNA Polymerase is highly thermostable DNA polymerase (Fig.1). The enzyme catalyzes 5' to 3' synthesis of DNA, but lacks 3' to 5' exonuclease activity.

SOURCE:

Recombinant *E. coli* strain with cloned gene encoding *Thermus aquaticus* DNA polymerase.

UNIT DEFINITION:

One unit of the enzyme catalyzes the incorporation of 10 nanomoles of deoxyribonucleotides into a polynucleotide fraction in 30 min at 70°C.

QUALITY CONTROL:

Free of detectable, non-specific nucleases.

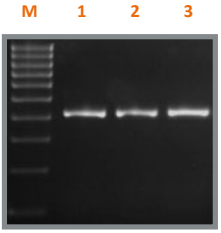
STORAGE & DILUTION BUFFER:

20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 100 mM KCl, 0.5% Nonidet P40, 0.5% Tween 20 and 50% glycerol.

CONCENTRATION:

5 units/µl

FIGURE 1.
Amplification of 420 bp target DNA using Atlas Taq DNA Polymerase.
M – Atlas Star 100 bp DNA Ladder
1-3 – Atlas Taq DNA Polymerase



Ordering Information		
Product	**Quantity**	**Cat. #**
AtlasTaq DNA Polymerase	500 units	**BA00103**
AtlasTaq DNA Polymerase	1000 units	**BA00104**
AtlasTaq DNA Polymerase	2500 units	**BA00105**

SUPPLIED WITH:
Atlas 10x Taq Buffer: 100 mM Tris-HCl (pH 8.8 at 25°C), 500 mM KCl, 0.8% Nonident P40.
Atlas 10x Taq Buffer with $(NH_4)_2SO_4$: 750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM $(NH_4)_2SO_4$, 0.1% Tween 20.
Atlas 25 mM $MgCl_2$
SHIPPING & STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas HotTaq DNA Polymerase

APPLICATIONS:

- Polymerase chain reaction setup at room temperature.
- Effective incorporation of modified nucleotides.

DESCRIPTION:

Atlas HotTaq DNA Polymerase catalyzes 5´ to 3´ synthesis of DNA, but lacks 3´ to 5´ exonuclease activity (Fig. 1). Prior the first PCR step the Atlas HotTaq DNA Polymerase should be activated by 15 minute incubation at 95 - 97°C.

SOURCE:

Recombinant *E. coli* strain with cloned gene encoding *Thermus aquaticus* DNA polymerase.

UNIT DEFINITION:

One unit of the enzyme catalyzes the incorporation of 10 nanomoles of deoxyribonucleotides into a polynucleotide fraction in 30 min at 70°C.

QUALITY CONTROL:

Free of detectable, non-specific nucleases. Activity and stability tested at 20, 30 and 40 cycles of PCR reaction at 95°C. Tested for the absence of human DNA contamination by PCR with Alu-specific primers.

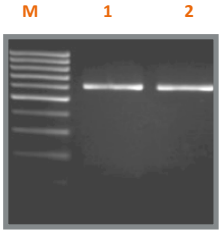
STORAGE & DILUTION BUFFER:

20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 100 mM KCl, 0.5% Nonidet P40, 0.5% Tween 20 and 50% glycerol.

CONCENTRATION:

10 units/µl

FIGURE 1.
Amplification of 600 bp target DNA using Atlas HotTaq DNA Polymerase.
M – Atlas Star 100 bp DNA Ladder
1-2 – Atlas HotTaq DNA Polymerase



Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas HotTaq DNA Polymerase	500 units	**BA00203**
Atlas HotTaq DNA Polymerase	1000 units	**BA00204**
Atlas HotTaq DNA Polymerase	2500 units	**BA00205**

SUPPLIED WITH:
Atlas 10x Taq Buffer: 100 mM Tris-HCl (pH 8.8 at 25°C), 500 mM KCl, 0.8% Nonident P40.
Atlas 10x Taq Buffer with $(NH_4)_2SO_4$: 750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM $(NH_4)_2SO_4$, 0.1% Tween 20.
Atlas 25 mM $MgCl_2$
SHIPPING & STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas RedTaq DNA Polymerase

APPLICATIONS:

- Suited for a wide range of PCR assays.
- Easy visualization of enzyme addition.
- Visualization of complete reaction mixing.
- Direct loading of samples following amplification.

DESCRIPTION:

Atlas RedTaq DNA Polymerase catalyzes 5´ to 3´ synthesis of DNA, but lacks 3´ to 5´exonuclease activity (Fig.1). The enzyme has proven to have high amplification yield, be stable at high temperature. Added inert dye will not have any interference to the reaction. Visual confirmation that the enzyme has been added and that proper component mixing of the reaction has occurred. Samples can be loaded directly onto an agarose gel for electrophoresis with no loading dye addition.

SOURCE:

Recombinant *E. coli* strain with cloned gene encoding *Thermus aquaticus* DNA polymerase.

UNIT DEFINITION:

One unit of the enzyme catalyzes the incorporation of 10 nanomoles of deoxyribonucleotides into a polynucleotide fraction in 30 min at 70°C.

QUALITY CONTROL:

Free of detectable, non-specific nucleases.

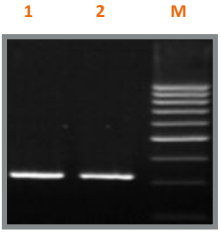
STORAGE & DILUTION BUFFER:

20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 100 mM KCl, 0.5% Nonidet P40, 0.5% Tween 20 and 50% glycerol.

CONCENTRATION:

1 units/µl

FIGURE 1.
Amplification of 330 bp target DNA using Atlas RedTaq DNA Polymerase.
1-2 – Atlas RedTaq DNA Polymerase
M – Atlas Star 100 bp DNA Ladder



Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas RedTaq DNA Polymerase	500 units	**BA00303**
Atlas RedTaq DNA Polymerase	1000 units	**BA00304**
Atlas RedTaq DNA Polymerase	2500 units	**BA00305**

SUPPLIED WITH:
Atlas 10x Taq Buffer: 100 mM Tris-HCl (pH 8.8 at 25°C), 500 mM KCl, 0.8% Nonident P40.
Atlas 10x Taq Buffer with $(NH_4)_2SO_4$: 750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM $(NH_4)_2SO_4$, 0.1% Tween 20.
Atlas 25 mM $MgCl_2$
SHIPPING & STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas Pfu DNA Polymerase

APPLICATIONS:

- Close to ten times more accurate than normal DNA polymerase.
- Produces blunt-ended amplification products to be used for cloning.
- Remains active even after incubating 90 minutes at 95°C.

DESCRIPTION:

In addition to 5´ to 3´ DNA polymerase activity, Atlas Pfu DNA Polymerase also possesses 3´ to 5´ exonuclease (proofreading) activity (Fig.1). Atlas Pfu DNA Polymerase exhibits the lowest error rate of any thermostable DNA polymerase studied, is even up to ten fold more accurate than normal Taq DNA polymerase. Consequently, Atlas Pfu DNA Polymerase is useful for polymerization reactions requiring high-fidelity synthesis.

SOURCE:

Recombinant *E. coli* strain with cloned gene encoding Pyrococcus furiosus DNA polymerase.

UNIT DEFINITION:

One unit of the enzyme catalyzes the incorporation of 10 nanomoles of deoxyribonucleotides into a polynucleotide fraction in 30 min at 70°C.

QUALITY CONTROL:

Free of detectable, non-specific nucleases.

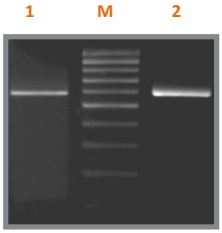
STORAGE & DILUTION BUFFER:

20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 100 mM KCl, 0.5% Nonidet P40, 0.5% Tween 20 and 50% glycerol.

CONCENTRATION:

5 units/µl

FIGURE 1.
Amplification of 600 bp target DNA using Atlas Pfu DNA Polymerase.
M – Atlas Star 100 bp DNA Ladder
1-2 – Atlas Pfu DNA Polymerase



Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Pfu DNA Polymerase	500 units	**BA00503**
Atlas Pfu DNA Polymerase	1000 units	**BA00504**
Atlas Pfu DNA Polymerase	2500 units	**BA00505**

SUPPLIED WITH:
Atlas 10x Pfu Buffer: 100 mM Tris-HCl (pH 8.8 at 25°C), 100 mM KCl, 100 mM $(NH_4)_2SO_4$, 1% Triton X-100, 1 mg/ml BSA
Atlas 10x Pfu Buffer with $MgSO_4$: 200 mM Tris-HCl (pH 8.8 at 25°C), 100 mM KCl, 100 mM $(NH_4)_2SO_4$, 1% Triton X-100, 1 mg/ml BSA, 25 mM $MgSO_4$. Atlas 25 mM $MgSO_4$
SHIPPING & STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Titan Taq DNA Polymerase

APPLICATIONS:

- Suited for a wide range of PCR assays.
- Primer extension.
- TA cloning.

DESCRIPTION:

Titan Taq DNA Polymerase is highly processive, thermostable DNA polymerase (Fig.1). The enzyme has 5' to 3' polymerisation-dependent exonuclease replacement activity but lacks 3' to 5' exonuclease activity. The enzyme has "extendase activity" allowing TA cloning.

SOURCE:

Purified from an *E. coli* strain carrying an overproducing plasmid containing a modified gene of *Thermus aquaticus* DNA Polymerase.

UNIT DEFINITION:

One unit is defined as the amount of enzyme required to catalyze the incorporation of 10 nmol of dNTP into an acid-insoluble form in 30 min at 74°C.

QUALITY CONTROL:

The enzyme is free of nicking and priming activities, exonucleases and unspecific endonucleases. SDS/PAGE - 95 kD band, >98% pure. Activity and stability tested via thermocycling. The error rate per nucleotide per cycle is ~2.5 x 10^5; the accuracy is ~4 x 10^4. Estimated half life at 95°C is 1.5 hours.

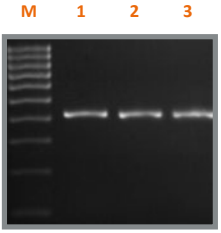
STORAGE & DILUTION BUFFER:

50% glycerol (v/v), 20 mM Tris-HCl pH 8.7 at 25°C, 100 mM KCl, 0.1 mM EDTA and stabilizers.

CONCENTRATION:

5 units/µl

FIGURE 1.
Amplification of 420 bp target DNA using Titan Taq DNA Polymerase.
M – Atlas Star 100 bp DNA Ladder
1-3 – Titan Taq DNA Polymerase



Ordering Information		
Product	**Quantity**	**Cat. #**
Titan Taq DNA Polymerase	500 units	**BT10101**
Titan Taq DNA Polymerase	1000 units	**BT10102**
Titan Taq DNA Polymerase	2000 units	**BT10103**

SUPPLIED WITH:
10x Reaction Buffer 1 (Mg^{2+} free): 800 mM Tris-HCl (pH 9.4 at 25°C), 200 mM $(NH_4)_2SO_4$, 0.2% w/v Tween-20. 25 mM $MgCl_2$
SHIPPING & STORAGE CONDITIONS:
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of this reagent. Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Titan HotTaq DNA Polymerase

APPLICATIONS:

- Hot Start PCR.
- Primer extension.
- TA cloning.

DESCRIPTION:

Titan HotTaq DNA Polymerase (Fig. 1) is a modified Titan Taq DNA Polymerase. At ambient temperatures it is inactive, having no polymerase activity. Titan HotTaq DNA Polymerase is activated by a 15 minute incubation at 95-97°C, preventing the extension of non-specifically annealed primers and primer-dimers formed at low temperatures during PCR setup. The enzyme has 5' to 3' polymerisation-dependent exonuclease replacement activity but lacks 3' to 5' exonuclease activity. The enzyme has "extendase activity" allowing TA cloning.

SOURCE:

Purified from an *E. coli* strain carrying an overproducing plasmid containing a modified gene of *Thermus aquaticus* DNA Polymerase.

UNIT DEFINITION:

One unit is defined as the amount of enzyme required to catalyze the incorporation of 10 nmol of dNTP into an acid-insoluble form in 30 min at 74°C.

QUALITY CONTROL:

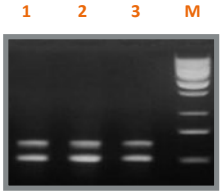
The enzyme is free of nicking and priming activities, exonucleases and unspecific endonucleases. SDS/PAGE - 95 kD band, >98% pure. Activity and stability tested via thermocycling. The error rate per nucleotide per cycle is ~2.5 x 10^5; the accuracy is ~4 x 10^4. Estimated half life at 95°C is 1.5 hours.

STORAGE & DILUTION BUFFER:

50% glycerol (v/v), 20 mM Tris-HCl pH 8.7 at 25°C, 100 mM KCl, 0.1 mM EDTA and stabilizers.

CONCENTRATION: 5 units/µl

FIGURE 1.
Amplification of ~500bp and ~600bp target DNA fragments using Titan HotTaq DNA Polymerase.
1-3 – Titan HotTaq DNA Polymerase
M – Atlas Star 1 Kb DNA Ladder



Ordering Information		
Product	**Quantity**	**Cat. #**
Titan HotTaq DNA Polymerase	500 units	**BT10201**
Titan HotTaq DNA Polymerase	1000 units	**BT10202**

SUPPLIED WITH:
10x Reaction Buffer B1 (Mg^{2+}, detergent free): Tris-HCl and $(NH_4)_2SO_4$, 10x Reaction Buffer B2 (Mg^{2+} free): Tris-HCl, $(NH_4)_2SO_4$ and detergent, 25 mM $MgCl_2$, 10x Enhancer. *Additive that facilitates amplification of difficult templates (e.g. GC-rich DNA templates). This solution should be used at a defined working concentration (1x, 2x or 3x solution). Enhancer is NOT a reaction buffer and should be used ONLY IF non-specific amplifications occur.*
SHIPPING & STORAGE CONDITIONS:
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of this reagent. Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas H Minus M-MLV Reverse Transcriptase

APPLICATIONS:

- cDNA synthesis.
- RNA analysis by primer extension.
- DNA labeling.

DESCRIPTION:

The Atlas H Minus M-MLV Reverse Transcriptase is a genetically modified M-MLV RT which exhibits RNA or DNA dependent DNA polymerase, but lacks ribonuclease H activity. This enzyme can synthesize a complementary DNA strand initiating from a primer using RNA or DNA templates. Removal of the RNase H activity results in an increase of full-length cDNA products. The enzyme has RNA polymerization-dependent and DNA polymerization-dependent activity but lacks ribonuclease H activity.

UNIT DEFINITION:

One unit is defined as the amount of enzyme required to catalyze the incorporation of 1 nmol of dTTP into an acid-insoluble form in 10 minutes at 37°C.

QUALITY CONTROL:

Free of endo- and exodeoxyribonucleases, phosphatases and ribonuclease. Activity and stability tested in first strand cDNA synthesis.

STORAGE & DILUTION BUFFER:

50% glycerol, 20 mM Tris-HCl pH 7.6 at 25ºC, 150 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 0.1% IGEPAL CA-630.

CONCENTRATION:

200 units/µl

Ordering Information

Product	Quantity	Cat. #
Atlas H Minus M-MLV Reverse Transcriptase	10000 units	**BT10902**

SUPPLIED WITH:
Reaction Buffer with DTT: 250 mM Tris-HCl, 150 mM KCl, 40 mM $MgCl_2$, 25 mM DTT
5X Reaction Buffer: 250 mM Tris-HCl, 150 mM KCl, 40 mM $MgCl_2$
100 mM DTT
SHIPPING & STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

PCR Mixes

Atlas Taq 2x PCR Mix

APPLICATIONS:

- Ready-to-use mix reduces experimental variability.
- Reduced pipetting steps, thereby less time-consuming set-up of PCR.

DESCRIPTION:

Atlas Taq 2x PCR Mix is a prepared solution containing everything needed for successful PCR reaction except specific primers and DNA template. The mix includes high-quality recombinant Atlas Taq DNA Polymerase, nucleotides in a specifically optimized buffer formulation and $MgCl_2$ with final concentration of 2 mM. For reaction set-up add the PCR Mix (25 µl) to the primers, template and water (is provided in the set; total volume of 50 µl).

QUALITY CONTROL:

Free of detectable, non-specific nucleases.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Taq 2x PCR Mix	100 reactions	**BA01501**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas HotTaq 2x PCR Mix

APPLICATIONS:

- Ready-to-use mix reduces experimental variability.
- Reduced pipetting steps, thereby less time-consuming set-up of PCR.
- Set-up at room temperature.

DESCRIPTION:

Atlas HotTaq 2x PCR Mix is a prepared solution containing everything needed for successful PCR reaction except specific primers and DNA template. The mix includes high-quality recombinant Atlas HotTaq DNA polymerase, nucleotides in a specifically optimized buffer formulation and $MgCl_2$ with final concentration of 2 mM. For reaction set-up add the PCR Mix (25 µl) to the primers, template and water (is provided in the set; total volume of 50 µl).

QUALITY CONTROL:

Free of detectable, non-specific nucleases.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas HotTaq 2x PCR Mix	100 reactions	**BA01503**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas RedTaq 2x PCR Mix

APPLICATIONS:

- Ready-to-use mix reduces experimental variability.
- Reduced pipetting steps, thereby less time-consuming set-up of PCR.
- Set-up at room temperature.
- Visualization of complete reaction mixing.
- Direct loading of samples following amplification.

DESCRIPTION:

Atlas RedTaq 2x PCR Mix is a prepared solution containing everything needed for successful PCR reaction except specific primers and DNA template. The mix includes high-quality recombinant Atlas HotTaq DNA Polymerase, nucleotides in a specifically optimized buffer formulation and and $MgCl_2$ with final concentration of 2 mM. Added inert dye will provide visual confirmation that the enzyme has been added and that proper component mixing of the reaction has occurred. Samples can be loaded directly onto an agarose gel for electrophoresis with no loading dye addition.

For reaction set-up add the PCR Mix (25 µl) to the primers, template and water (is provided in the set; total volume of 50 µl).

QUALITY CONTROL:

Free of detectable, non-specific nucleases.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas RedTaq 2x PCR Mix	100 reactions	**BA01507**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Titan Taq 5x PCR Mixes

APPLICATIONS:

- Suited for a wide range of PCR assays.
- TA cloning.

DESCRIPTION:

Titan Taq 5x PCR Mix is a premixed ready-to-use solution containing all reagents required for PCR (except template, primers and water). Titan Taq 5x PCR Mix is also available as Ready-to-load solution that consists an additional compound needed for direct loading onto agarose gel and two tracking dyes (blue and yellow) which allow to monitor progress during electrophoresis.

COMPOSITION:

- Titan Taq DNA polymerase
- 5x Reaction Buffer 1
- 12.5 mM $MgCl_2$
- 1 mM dNTPs of each

ADDITIONAL COMPONENTS FOR READY-TO-LOAD SOLUTION:

- Blue dye
- Yellow dye
- Compound that increases sample density for direct loading

TITAN TAQ 5X PCR MIX IS ALSO AVAILABLE IN 8 TUBE STRIPS.

Ordering Information		
Product	**Quantity**	**Cat. #**
Titan Taq 5x PCR Mix 12.5 mM	1 mL (250 reactions)	**BT10402**
Titan Taq 5x PCR Mix Ready-to-Load 12.5 mM	1 mL (250 reactions)	**BT10502**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
Shipping and temporary storage for up to 1 month at room temperature or storage for up to 6 months at 2-8^{0}C has no detrimental effects on the quality of Titan Taq 5x PCR Mix.
COMMENTS:
This product is solely for research use only.

Titan HotTaq Power Mix

APPLICATIONS:

- Hot Start PCR
- Proofreading

DESCRIPTION:

Titan HotTaq Power Mix is a premixed ready to load solution containing: all reagents required for PCR (except template, primers and water), compound needed for direct loading onto agarose gel and two tracking dyes to follow the electrophoresis.

Titan HotTaq Power Mix contains two enzymes – Titan HotTaq DNA polymerase and a proofreading polymerase. These enzymes together have both the 5' to 3' exonuclease activity as well as the 3' to 5' proofreading activity.

Titan HotTaq Power Mix is recommended to use in any PCR application that will be visualized by agarose gel electrophoresis and AtlasSight DNA Stain or Ethidium bromide staining.

COMPOSITION:

- Titan HotTaq DNA Polymerase
- Proofreading enzyme
- 5x Reaction Buffer
- 12.5 mM $MgCl_2$ (1x PCR solution – 2.5 mM $MgCl_2$)
- 2 mM dNTPs of each (1x PCR solution – 200 µM dATP, 200 µM dCTP, 200 µM dGTP and 200 µM dTTP)
- BSA
- Blue dye (Migration equivalent to 3.5-4.5 kb DNA fragment)
- Yellow dye (Migration rate in excess of primers in 1% agarose gel: <35-45 bp)
- Compound that increases sample density for direct loading

Ordering Information

Product	Quantity	Cat. #
Titan HotTaq Power Mix, Ready to load	1 mL (250 reactions)	**BT10801**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
Shipping and temporary storage for up to 1 month at room temperature or storage for up to 6 months at 2-8°C has no detrimental effects on the quality of Titan HotTaq 10x PCR Mix.
COMMENTS:
This product is solely for research use only.

qPCR Mixes

Titan HotTaq Probe qPCR Mixes

APPLICATIONS:

- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Viral load determination

DESCRIPTION:

Titan HotTaq Probe qPCR Mix is optimized for real-time quantitative PCR assays and contains all the components necessary to perform qPCR, with the exception of template, primers, and probe. The qPCR Mix contains optimized components and Titan HotTaq DNA polymerase supplied in a proprietary reaction buffer that enables detection of low copy number targets.

Titan HotTaq DNA polymerase is activated by a 15 min incubation step at 95°C. This prevents extension of non-specifically annealed primers and primer-dimers formed at low temperatures during qPCR setup.

Titan HotTaq Probe qPCR Mix is available with ROX or no ROX dye.

COMPOSITION:

- Titan HotTaq DNA polymerase
- 5x qPCR Buffer P
- 15 mM $MgCl_2$: 1 x PCR solution – 3 mM $MgCl_2$
- dNTPs, including dTTP to improve reaction sensitivity and efficiency compared to dUTP
- ROX dye*
- or no ROX dye

**ROX dye is an internal passive reference dye used to normalize the fluorescent reporter signal generated in qPCR.*

CYCLER AND PROBE COMPATIBILITY:

Titan HotTaq Probe qPCR Mix (ROX) is compatible for use with any probe system and qPCR cyclers requiring high ROX dye level, including ABI PRISM® 5700, 7000, 7300, 7500, 7700, 7900 and 7900HT (including Fast-Block); Stratagene Mx3000P™, Mx3005P™ and Mx4000®. **Titan HotTaq Probe qPCR Mix (no ROX)** is compatible for use with any probe system and qPCR cyclers that do not require reference dye, including Bio-Rad iQ™ 5, Opticon™, Opticon™ 2; Chromo 4™, MiniOpticon, CFX96, CFX384; Cepheid SmartCycler™; Corbett Rotor-Gene™ 3000, Rotor-Gene™ 6000; Eppendorf Mastercycler® ep realplex; Roche LightCycler® 480 and Techne Quantica™.

Ordering Information

Product	Quantity	Cat. #
Titan HotTaq Probe qPCR Mix (ROX)	1 mL (250 reactions)	**BT11001**
Titan HotTaq Probe qPCR Mix (no ROX)	1 mL (250 reactions)	**BT11002**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of Titan HotTaq Probe qPCR Mix.
COMMENTS:
This product is solely for research use only.

Titan HotTaq Probe qPCR Capillary Mix

APPLICATIONS:

- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Viral load determination

DESCRIPTION:

Titan HotTaq Probe qPCR Capillary Mix is optimized for real-time quantitative PCR assays for qPCR cyclers with capillaries. The mix contains several components necessary to perform qPCR, including Titan HotTaq DNA polymerase. Only template, primers, probe and water needs to be added. Titan HotTaq DNA polymerase is activated by a 15 min incubation step at 95°C, preventing the extension of non-specifically annealed primers and primer-dimers formed at low temperatures during qPCR setup.

COMPOSITION:

- Titan HotTaq DNA polymerase
- 5 x qPCR buffer P
- 15 mM $MgCl_2$
- 1 x PCR solution – 3 mM $MgCl_2$
- dNTPs, including dTTP to improve reaction sensitivity and efficiency
- BSA

CYCLER COMPATIBILITY:

Titan HotTaq Probe qPCR Capillary Mix can be used with LightCycler® 1.x and LightCycler® 2.0 (Roche Applied Sciences).

Ordering Information		
Product	**Quantity**	**Cat. #**
Titan HotTaq Probe qPCR Capillary Mix	1 mL (250 reactions)	**BT11003**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of Titan HotTaq Probe qPCR Capillary Mix.
COMMENTS:
This product is solely for research use only.

Titan HotTaq Probe qPCR Universal Mix

APPLICATIONS:

- DNA/LNA hydrolysis probe based assays
- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Viral load determination

DESCRIPTION:

Titan HotTaq Probe qPCR Universal Mix is optimized for real-time quantitative PCR assays and contains all the components necessary to perform singleplex or duplex qPCR, with the exception of template, primers, and probes. The qPCR Mix contains optimized components and Titan HotTaq DNA polymerase supplied in a proprietary reaction buffer that enables efficient amplification of regular and GC-rich targets. Titan HotTaq Probe qPCR Universal Mix is optimized for DNA/LNA hydrolysis probes based on the 5' flap endonuclease activity. Titan HotTaq DNA polymerase is activated by a 10 min incubation step at 95°C. This prevents extension of nonspecifically annealed primers and primer -dimers formed at low temperatures during qPCR setup.

BENEFITS:

- Increased sensitivity and specificity for a wide range of templates, including AT-rich, GC-rich and regular cDNA and gDNA.
- Suitable for singleplex and duplex assays.
- Reaction set-up at room temperature – the mix is stable at ambient temperature for one month.
- Benchtop stability for 48 hours for pre-assembled reactions.
- Wide instrument compatibility: suitable for qPCR cyclers regardless of ROX requirements (except capillary).

COMPOSITION:

Titan HotTaq DNA polymerase
Titan HotTaq Probe qPCR Universal buffer
15 mM $MgCl_2$ 1x PCR solution – 3 mM $MgCl_2$
dNTPs, including dUTP. The mix allows UNG treatment to prevent carryover contamination from previous runs.
IMPORTANT: UNG is not included in the Titan HotTaq Probe qPCR Universal Mix and must be purchased separately.
Internal reference based on ROX dye.
For multiplex application: if ROX dye is used as one of the fluorophores, internal reference might interfere with the signal – a version without ROX is available upon request.

IN A SEPARATE VIAL:

100% DMSO is included in the kit in a separate vial.
DMSO is recommended as a PCR additive for templates with high GC content. In some cases DMSO is also required to relax secondary structures. While testing it is recommended to

include one sample with additional 2,5 % DMSO to test if it improves the results. For further DMSO optimization the concentration can be raised in 2,5% increments up to 10% based on following table. Volumes are given per reaction depending on final volume of reaction mix. The highest DMSO concentration recommended is 10% which should be used for all templates with GC content over 70%.

CYCLER COMPATIBILITY:

Suitable for ROX-dependent and ROX-independent qPCR cyclers.

Ordering Information		
Product	**Quantity**	**Cat. #**
Titan HotTaq Probe qPCR Universal Mix	1 mL (250 reactions)	**BT11004**

SHIPPING &STORAGE CONDITIONS:
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of Titan HotTaq Probe qPCR Universal Mix. Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Titan HotTaq EvaGreen® qPCR Mixes

APPLICATIONS:

- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Viral load determination

DESCRIPTION:

Titan HotTaq EvaGreen® qPCR Mix is optimized for real-time quantitative PCR assays. The mix includes Titan HotTaq DNA polymerase, ultrapure dNTPs, $MgCl_2$, EvaGreen® dye (and ROX dye according to system requirements). Only template, primers and water need to be added.

Titan HotTaq DNA polymerase is activated by a 15 min incubation step at 95°C. This prevents extension of non-specifically annealed primers and primer-dimers formed at low temperatures during qPCR setup.

Titan HotTaq EvaGreen® qPCR Mix is available with ROX or no ROX dye.

COMPOSITION:

- Titan HotTaq DNA polymerase
- 5x qPCR Buffer E
- 12.5 mM $MgCl_2$: 1 x PCR solution – 2.5 mM $MgCl_2$
- dNTPs, including dTTP to improve reaction sensitivity and efficiency compared to dUTP
- EvaGreen® dye*
- ROX dye**:
- or no ROX dye

CYCLER COMPATIBILITY:

Titan HotTaq EvaGreen® qPCR Mix (ROX) can be used with all major qPCR cyclers requiring ROX dye, including ABI PRISM® 5700, 7000, 7300, 7500, 7700, 7900 and 7900HT (including Fast-Block); Stratagene Mx3000P™, Mx3005P™ and Mx4000®.

Titan HotTaq EvaGreen® qPCR Mix (no ROX) can be used with all major qPCR cyclers that do not require reference dye, including Bio-Rad iQ™ 5, Opticon™, Opticon™ 2; Chromo 4™, MiniOpticon, CFX96, CFX384; Corbett Rotor-Gene™ 3000, Rotor-Gene™ 6000; Roche LightCycler® 480 and Techne Quantica™.

Ordering Information

Product	Quantity	Cat. #
Titan HotTaq EvaGreen® qPCR Mix (ROX)	1 mL (250 reactions)	**BT11101**
Titan HotTaq EvaGreen® qPCR Mix (no ROX)	1 mL (250 reactions)	**BT11102**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored. Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of Titan HotTaq EvaGreen® qPCR Mix.
COMMENTS:
This product is solely for research use only.

* EvaGreen® is a DNA-binding dye for qPCR that, compared to SYBR® Green I, has similar spectra but much less PCR inhibition. It is extremely stable and nonmutagenic/ noncytotoxic. EvaGreen® is compatible with all common qPCR cyclers by selecting the standard settings for SYBR® Green or FAM. "EvaGreen® is a registered trademark of BIOTIUM, INC."
The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer, where such research does not include testing, analysis or screening services for any third party in return for compensation on a per test basis. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. "SYBR® is a registered trademark of Molecular Probes, Inc."
** ROX dye is an internal passive reference dye used to normalize the fluorescent reporter signal generated in qPCR.

Titan HotTaq EvaGreen® qPCR Capillary Mix

APPLICATIONS:

- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Viral load determination

DESCRIPTION:

Titan HotTaq EvaGreen® qPCR Capillary Mix is optimized for real-time quantitative PCR assays for qPCR cyclers with capillaries. The mix includes Titan HotTaq DNA polymerase, dNTPs, $MgCl_2$ and EvaGreen® dye. Only template, primers and water need to be added.

Titan HotTaq DNA polymerase is activated by a 15 min incubation step at 95°C, preventing the extension of non-specifically annealed primers and primer-dimers formed at low temperatures during qPCR setup.

COMPOSITION:

- Titan HotTaq DNA polymerase
- 5x qPCR Buffer E
- 12.5 mM $MgCl_2$: 1 x PCR solution – 2.5 mM $MgCl_2$
- dNTPs, including dTTP to improve reaction sensitivity and efficiency compared to dUTP
- EvaGreen® dye*
- BSA

Ordering Information		
Product	**Quantity**	**Cat. #**
Titan HotTaq EvaGreen® qPCR Capillary Mix	1 mL (250 reactions)	**BT11103**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored. Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of Titan HotTaq EvaGreen® qPCR Capillary Mix.
COMMENTS:
This product is solely for research use only.

* EvaGreen® is a DNA-binding dye for qPCR that, compared to SYBR® Green I, has similar spectra but much less PCR inhibition. It is extremely stable and nonmutagenic/ noncytotoxic. EvaGreen® is compatible with all common qPCR cyclers by selecting the standard settings for SYBR® Green or FAM. "EvaGreen® is a registered trademark of BIOTIUM, INC."
The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer, where such research does not include testing, analysis or screening services for any third party in return for compensation on a per test basis. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.
"SYBR® is a registered trademark of Molecular Probes, Inc."

Titan HotTaq EvaGreen® qPCR Universal Mix

APPLICATIONS:

- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Viral load determination

DESCRIPTION:

Titan HotTaq EvaGreen® qPCR Universal Mix is an optimised ready-to-use solution for real time quantitative PCR assays, incorporating EvaGreen® dye. It comprises all the components necessary, excluding the template and primers, to perform highly sensitive qPCR. Titan HotTaq DNA polymerase is activated by a 12 min incubation step at 95°C. The hot-start mechanism prevents the extension of non-specifically annealed primers and primer-dimers formed at low temperatures during qPCR setup.

BENEFITS:

- Wide instrument compatibility - suitable for qPCR cyclers regardless of ROX requirements (except capillary).
- Reaction set-up at room temperature
- Highly specific and reproducible real time PCR
- Excellent efficiency in case of low copy number targets
- UNG treatment capability due to dNTP blend of dUTP/dTTP
- Superior performance with long (up to 500 bp) and GC-rich templites
- Blue visualisation dye for easy pipetting

COMPOSITION:

Titan HotTaq DNA polymerase
Optimized buffer
12.5 mM $MgCl_2$ 1x PCR solution – 2.5 mM $MgCl_2$
dNTPs, including dUTP Mix allows UNG treatment to prevent carryover contamination from previous runs.

IMPORTANT: UNG is not included in the Titan HotTaq EvaGreen® qPCR Universal Mix
*EvaGreen® dye**
Internal reference based on ROX dye
GC-enhancer
Blue visualisation dye

Ordering Information

Product	Quantity	Cat. #
Titan HotTaq EvaGreen® qPCR Universal Mix	1 mL (250 reactions)	**BT11104**

SHIPPING & STORAGE CONDITIONS:
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of Titan HotTaq EvaGreen® qPCR Universal Mix. Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

* EvaGreen® is a DNA-binding dye for qPCR that, compared to SYBR® Green I, has similar spectra but much less PCR inhibition. It is extremely stable and nonmutagenic/ noncytotoxic. EvaGreen® is compatible with all common qPCR cyclers by selecting the standard settings for SYBR® Green or FAM.
"EvaGreen® is a registered trademark of BIOTIUM, INC."
The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer, where such research does not include testing, analysis or screening services for any third party in return for compensation on a per test basis. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.
"SYBR® is a registered trademark of Molecular Probes, Inc."

Titan HotTaq EvaGreen® HRM Mixes

APPLICATIONS:

- High Resolution Melt (HRM)

DESCRIPTION:

Titan HotTaq EvaGreen® qPCR Capillary Mix (no ROX) is an optimised ready-to-use solution for High Resolution Melt (HRM) Analysis, incorporating EvaGreen® dye. It comprises all the components necessary to perform qPCR and HRM Analysis: Titan HotTaq DNA Polymerase, ultrapure dNTPs, $MgCl_2$ and EvaGreen® dye. The user simply needs to add water, template and primers.

Titan HotTaq DNA Polymerase is activated by a 15 min incubation step at 95°C. This prevents extension of nonspecifically annealed primers and primer-dimers formed at low temperatures during qPCR setup.

COMPOSITION:

Titan HotTaq DNA polymerase
5x EvaGreen® HRM buffer
12.5 mM $MgCl_2$ 1x PCR solution – 2.5 mM $MgCl_2$
dNTPs
EvaGreen® dye*
BSA
ROX dye**:
or no ROX dye.

Ordering Information		
Product	**Quantity**	**Cat. #**
Titan HotTaq EvaGreen® HRM Mix (ROX)	1 mL (250 reactions)	**BT11201**
Titan HotTaq EvaGreen® HRM Mix (no ROX)	1 mL (250 reactions)	**BT11202**

SHIPPING & STORAGE CONDITIONS:
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of Titan HotTaq EvaGreen® HRM Mix. Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

* EvaGreen® is a DNA-binding dye with many features that make it superior for HRM. Apart from having similar spectra, EvaGreen® has three important features that set it apart from SYBR® Green I: EvaGreen® has much less PCR inhibition, is an extremely stable dye and has been shown to be non-mutagenic and non-cytotoxic. EvaGreen® is compatible with all common real-time PCR cyclers – simply select the standard settings for SYBR® Green or FAM.
"EvaGreen® is a registered trademark of BIOTIUM, INC."
The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer, where such research does not include testing, analysis or screening services for any third party in return for compensation on a per test basis. The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.
"SYBR® is a registered trademark of Molecular Probes, Inc."
*** ROX dye is an internal passive reference dye used to normalize the fluorescent reporter signal generated in qPCR.*

PCR Buffers and Reagents

Atlas PCR Water

DESCRIPTION:

Atlas PCR Water is RNase, DNase and DNA contamination free. It is sterile and UV irradiated. Manufactured and tested for use as a component in PCR reactions. Validated as well for use with highly sensitive PCR reaction including those with eubacterial primer sets. Stored in convenient 2 mL tubes to avoid unnecessary melting and freezing of the whole water supply.

QUALITY CONTROL:

Free of RNase, DNase and DNA contamination.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas PCR Water	10 x 1.8 mL	**BA01201**
Atlas PCR Water	25 x 1.8 mL	**BA01202**
Atlas PCR Water	5 x 10 mL	**BA01203**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas DEPC-treated Water

DESCRIPTION:

Atlas nuclease free DEPC treated water is suitable for using with RNA. The diethylpyrocarbonate (DEPC) treated water is recommended for the preparation of RNA solution with desired concentration and also for the reconstitution of lyophilized products such as oligomers, proteins, and siRNA. This water is RNase, DNase, DNA and RNA contamination free. DEPC water is incubated with 0.1% diethylpyrocarbonate (DEPC), an RNase inhibitor, and then autoclaved in order to remove the DEPC.

QUALITY CONTROL:

Free of RNase and DNase contamination. This product has passed a quality control assay that verifies the absence of detectable levels of nuclease and ribonuclease activity.

Purification: Sterile, autoclaved and membrane filtered.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas DEPC-treated Water	5 x 1.8 mL	**BA01204**

STORAGE CONDITIONS:
Shipping at room temperature.
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas 25 mM $MgCl_2$

DESCRIPTION:

Atlas 25 mM $MgCl_2$ can be used for optimization of magnesium ion concentration in PCR reaction.

QUALITY CONTROL:

Amplification of a single-copy gene from human genomic DNA.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas 25 mM $MgCl_2$	1.8 mL	**BA00153**
Atlas 25 mM $MgCl_2$	5 x 1.8 mL	**BA00154**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas 10x Taq Buffer

DESCRIPTION:

10x Taq Buffer is a ready-to-use buffer to be used for Atlas Taq, Atlas HotTaq, Atlas RedTaq and Atlas LongTaq enzymes in PCR reactions. Does not contain $MgCl_2$.

COMPOSITION:

100 mM Tris-HCl (pH 8.8 at 25°C), 500 mM KCl, 0.8% Nonident P40.

QUALITY CONTROL:

Amplification of a single-copy gene from human genomic DNA.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas 10x Taq Buffer	1.8 mL	**BA00151**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas 10x Taq Buffer with $(NH_4)_2SO_4$

DESCRIPTION:

Atlas 10x Taq Buffer with $(NH_4)_2SO_4$ is a ready-to-use buffer to be used for Atlas Taq, Atlas HotTaq, Atlas RedTaq and Atlas LongTaq enzymes in PCR reactions. Does not contain $MgCl_2$.

COMPOSITION:

750 mM Tris-HCl (pH 8.8 at 25°C), 200 mM $(NH_4)_2SO_4$, 0.1% Tween 20.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas 10x Taq Buffer with $(NH_4)_2SO_4$	1.8 mL	**BA00152**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Nucleotides

Atlas Nucleotide Mixes

DESCRIPTION:

- Mix of four dNTPs in one tube
- Compatible with most molecular biology applications

Easy to use, time-saving solutions for use in applications requiring dNTPs of high purity. Atlas Nucleotide Mix contains dATP, dCTP, dGTP and dTTP, each at a final concentration of either 2 mM or 10 mM. Atlas Nucleotide Mixes have been tested for PCR and are compatible for all enzymes provided by Bioatlas.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas 10 mM Nucleotide Mix	1 mL	**BH40201**
Atlas 2 mM Nucleotide Mix	1 mL	**BH40202**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored. Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of this reagent.
COMMENTS:
This product is supplied for research use only.

Atlas dNTP Set

DESCRIPTION:

- Separate vials of four dNTPs
- Concentrated neutralized solutions

Atlas dNTP Set contains four separate vials (4×0.4 ml) of dATP, dCTP, dGTP and dTTP, at a concentration of 100 mM each, in highly purified (>99%) deionized water at pH 7.5. Atlas dNTP Set is free of RNase and DNase, and suitable for any molecular biology application that requires pure deoxynucleotides, such as PCR, real-time PCR, DNA sequencing, cDNA synthesis and nick translation. Atlas dNTP Set has been tested for PCR and is compatible for all enzymes provided by Bioatlas.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas dNTP Set (100 mM each)	4 x 400 µL	**BH40203**
Atlas dNTP Set (100 mM each)	4 x 1 mL	**BH40204**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored. Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of this reagent.
COMMENTS:
This product is supplied for research use only.

Atlas dUTP Nucleotide

DESCRIPTION:

Formula: C9H11N2O14P3
Formula Weight: 464.13

dUTP can be used in place of dTTP in PCR and RT-PCR protocols to prevent carryover from previous amplifications. Each lot of Atlas dUTP (100 mM) is function-tested to ensure specific DNA amplification and the absence of nuclease activity.

STORAGE SOLUTION:

100 mM dUTP solution in TE buffer (100 mM Tris pH 7.8, 1 mM EDTA).

PURITY:

Purity Assay (HPLC): >99%

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas dUTP Nucleotide (100 mM)	25 µmol (250 µl)	**BT10601**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored. Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of this reagent.
COMMENTS:
This product is supplied for research use only.

ELECTROPHORESIS
DNA Ladders

Atlas Star 100 bp DNA Ladders

APPLICATION:

For precise sizing of double-stranded DNA fragments from 100 to 1000 bp on agarose gels.

DESCRIPTION:

Atlas Star 100 bp DNA Ladders consist of ten fragments: 100 bp, 200 bp, 300 bp, 400 bp, 500 bp, 600 bp, 700 bp, 800 bp, 900 bp and 1000 bp (Figure 1). Supplied in sufficient quantity for 100 loadings using 4-5 µl per loading. Not designed for quantization of DNA concentration in a sample. Ladders available premixed as ready-to-use format premixed with loading-dye-solution (EXPRESS) or plain ladder to be mixed with loading dye of choice (also available from Bioatlas).

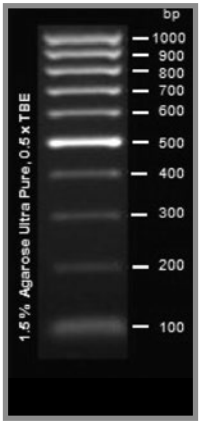


FIGURE 1.
Atlas Star 100 bp DNA Ladder

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Star 100 bp DNA Ladder EXPRESS	500 µL	**BA01302**
Atlas Star 100 bp DNA Ladder	500 µL	**BA01304**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Atlas Star 1 Kb DNA Ladder EXPRESS

APPLICATION:

For precise sizing of double-stranded DNA fragments from 1000 to 10000 bp on agarose gels.

DESCRIPTION:

Atlas Star 1 Kb DNA Ladder consists of 13 fragments: 300 bp, 500 bp, 700 bp, 1000 bp, 1500 bp, 2000 bp, 2500 bp, 3000 bp, 4000 bp, 5000 bp, 6000 bp, 8000 bp and 10000 bp (Figure 3). Atlas 1 kb DNA Ladder is a ready-to-use molecular weight marker suitable for DNA fragment size determination on gel electrophoresis. Atlas 1 kb DNA Ladder is formulated to run accurately and to provide crisp band patterns. It contains two dyes: bromophenol blue and xylene cyanole which serve as visual aid to monitor the progress of migration during agarose gel electrophoresis.

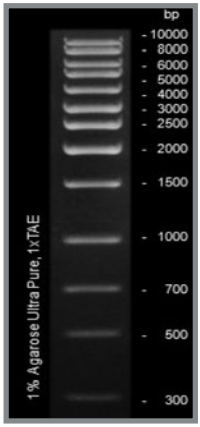


FIGURE 3.
Atlas Star 1 Kb DNA Ladder

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Star 1Kb DNA Ladder EXPRESS	500 µL	**BT10701**

STORAGE CONDITIONS:
Store at -20°C. Guaranteed stable for 1 year if properly stored.
COMMENTS:
This product is supplied for research use only.

Reagents for DNA Electrophoresis

Atlas Agarose Ultra Pure

APPLICATIONS:

- Analytical electrophoresis of DNA and RNA
- Blotting of DNA and RNA

DESCRIPTION:

Atlas Agarose Ultra Pure is nuclease-free all purpose agarose powder. Ideal for routine analysis of nucleic acids by gel electrophoresis (100 - 23000 bp) or blotting (>1 Kb) and is also suitable for protein applications. Due to its low EEO, DNA will have a high electrophoretic mobility.

FEATURES:

- Gel strength (1%) ≥1200 g/cm2
- Gelling temperature (1.5%) 36°C± 1.5°C
- Melting temperature (1.5%) ≥90°C
- Moisture: ≤ 10%
- Sulfate: ≤ 0.15%
- EEO (-mr): 0.05 – 0.13

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Agarose Ultra Pure	100 g	**BA01101**
Atlas Agarose Ultra Pure	500 g	**BA01102**

STORAGE CONDITIONS:
Store at room temperature. Protect from moisture. Light Sensitive.
COMMENTS:
This product is supplied for research use only.

Atlas Ethidium Bromide Solution

DESCRIPTION:

1% ethidium bromide solution is a concentrated fluorescent staining solution for visualizing ribonucleic acids in agarose and polyacrylamide gels. Ethidium bromide is excited with a standard 302 nm UV transilluminator and emits a red-orange signal.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Ethidium Bromide Solution, 1%	10 mL	**BA01901**
Atlas Ethidium Bromide Solution, 1%	5 x 1 mL	**BA01902**

STORAGE CONDITIONS:
Store at +4°C protected from light.
COMMENTS:
This product is supplied for research use only.

Atlas ClearSight DNA Stain

APPLICATIONS:

- Non-carcinogenic alternative to ethidium bromide.
- Excellent for nucleic acid electrophoresis and purification applications.

DESCRIPTION:

Atlas ClearSight DNA Stain is a new nucleic acid stain that can be used as a safer alternative to the traditional ethidium bromide stain for detecting nucleic acids in agarose gels. It is as sensitive as Ethidium bromide and can be used exactly the same way in agarose gel electrophoresis (Figure 1).

Atlas ClearSight DNA Stain emits green fluorescence when bound to DNA or RNA It has two secondary fluorescence excitation peaks (~270 nm; ~290 nm) and one strong excitation peak centered around 490 nm. The fluorescence emission is centered at ~530 nm. Thus, Atlas ClearSight DNA Stain is compatible with a wide variety of gel reading instruments. Atlas ClearSight DNA Stain can be used for precast agarose gels and when better sensitivity is needed - poststaining is recommended.

PROTOCOL:

Precasting: Prepare 100 ml of agarose gel solution (concentration from 0.8-3.0%) and heat until the solution is completely clear and no small floating particles are visible. Add 4-6 µl of Atlas ClearSight DNA Stain to the cooled gel solution (60-70^{0}C), mix it gently and pour into the gel tray (for higher sensitivity, the gel should be less than 0.5 cm thick). When the gel is solid, load the samples and perform electrophoresis. Detect the bands under UV. Note: Repeated melting of gels containing Atlas ClearSight DNA Stain may result in low sensitivity.

Poststaining: For <0.5 cm thick agarose gel, 10-25 ul of the stain should be used per 100 ml of buffer. Optimal staining time (5 - 60 minutes) and the amount of the stain may depend on the thickness of the gel and the percentage of agarose. Note: The Atlas ClearSight poststaining solution may be used 2-3 times. Staining solution to be reused should be preferably stored at room temperature in the dark.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas ClearSight DNA Stain	1 mL*	**BH40501**

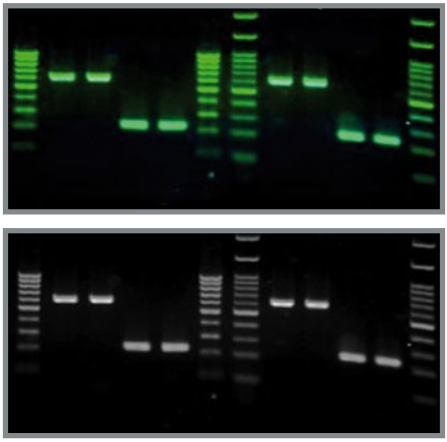


FIGURE 1.
Agarose gel, stained by Atlas ClearSight DNA Stain under UV light (A and B).

STORAGE CONDITIONS:
Store at +4°C, protected from light.
COMMENTS:
This product is solely for research use only.

**1 ml of Atlas ClearSight DNA Stain is sufficient for 17-25 L of agarose gel.*

Atlas ClearSight RNA Stain

APPLICATIONS:

- Non-carcinogenic alternative to ethidium bromide.
- Excellent for nucleic acid electrophoresis and purification applications.

DESCRIPTION:

Atlas ClearSight RNA Stain is a new nucleic acid stain that can be used as a safer alternative to the traditional ethidium bromide stain for detecting nucleic acids in agarose gels. It is as sensitive as Ethidium bromide and can be used exactly the same way in agarose gel electrophoresis (Figure 1). Atlas ClearSight RNA Stain emits green fluorescence when bound to DNA or RNA It has two secondary fluorescence excitation peaks (~270 nm; ~290 nm) and one strong excitation peak centered around 490 nm. The fluorescence emission is centered at ~530 nm. Thus, Atlas ClearSight RNA Stain is compatible with a wide variety of gel reading instruments. Atlas ClearSight RNA Stain can be used for precast agarose gels and when better sensitivity is needed - poststaining is recommended.

PROTOCOL:

Precasting: Prepare 100 ml of agarose gel solution (concentration from 0.8-3.0%) and heat until the solution is completely clear and no small floating particles are visible. Add 10 µl of Atlas ClearSight RNA Stain to the cooled gel solution (60-70ºC), mix it gently and pour into the gel tray (for higher sensitivity, the gel should be less than 0.5 cm thick). When the gel is solid, load the samples and perform electrophoresis. Detect the bands under UV or Bluelight. **Note:** Repeated melting of gels containing Atlas ClearSight RNA Stain may result in low sensitivity.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas ClearSight RNA Stain	0.4 mL	**BH40601**

Poststaining: For <0.5 cm thick agarose gel, 20-50 µl of the stain should be used per 100 ml of buffer. Optimal staining time (5 - 60 minutes) and the amount of the stain may depend on the thickness of the gel and the percentage of agarose. **Note:** The Atlas ClearSight RNA stain poststaining solution may be used 2-3 times. Staining solution to be reused should be preferably stored at room temperature in the dark.

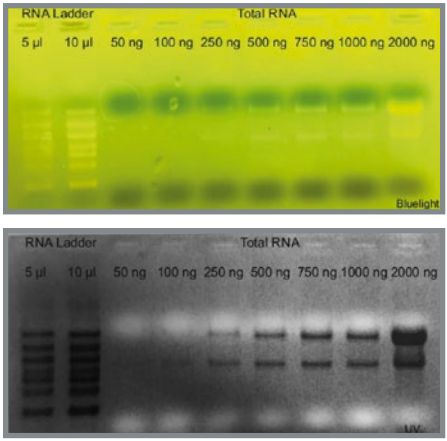


FIGURE 1.
1% formaldehyde gel stained with Atlas ClearSight RNA Stain. RNA bands are visualized under Bluelight or UV. Upper RNA band is 28s RNA around 4700bp and the lower one is 18s RNA around 1900bp.

SHIPPING & STORAGE CONDITIONS:
Shipping at room temperature has no detrimental effects on the quality of this reagent. Store at room temperature or at +4°C, protected from light.
COMMENTS:
This product is supplied for research use only.

Atlas Load 6x Loading Dye Bromophenol Blue

DESCRIPTION:

Atlas Load 6x Loading Dye contains bromophenol blue and xylene cyanol FF. The ready-to-use solution can be used for loading samples on agarose or polyacrylamide gels.

COMPOSITION:

10 mM TrisHCl (pH 7.6), 0.03% bromophenol blue, 0.03% xylene cyanol FF, 60% glycerol, 60 mM EDTA.

QUALITY CONTROL:

Functionally tested for DNA sample loading on agarose gel electrophoresis.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Load 6x Loading Dye Bromophenol Blue	6 x 1 mL	**BA01401**

STORAGE CONDITIONS:
Store at +4°C up to 12 months.
COMMENTS:
This product is supplied for research use only.

Atlas Load 6x Loading Dye Orange G

DESCRIPTION:

Atlas Load 6x Loading Dye contains orange G and xylene cyanol FF. The ready-to-use solution can be used for loading samples on agarose or polyacrylamide gels.

COMPOSITION:

10 mM TrisHCl (pH 7.6), 0.03% xylene cyanol FF, 0.15% orange G, 60% glycerol, 60 mM EDTA.

QUALITY CONTROL:

Functionally tested for DNA sample loading on agarose gel electrophoresis.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Load 6x Loading Dye Orange G	6 x 1 mL	**BA01402**

STORAGE CONDITIONS:
Store at +4°C up to 12 months.
COMMENTS:
This product is supplied for research use only.

Atlas Load 2x RNA Loading Dye with ethidium bromide

DESCRIPTION:

Atlas Load 2x RNA Loading Dye is recommended for the preparation of RNA samples and RNA Ladders for electrophoresis on agarose or polyacrylamide gels. The ready-to-use solution contains electrophoresis tracking dyes as bromophenol blue and xylene cyanol FF and the intercalating dye ethidium bromide. Also, it contains the denaturing agent and RNA stabilizer formamide.

COMPOSITION:

0.025% Bromphenol Blue, 0.025% Xylene Cyanol FF, 0.025% ethidium bromide, 95% formamide, 0.5mM EDTA, 0.025% SDS.

QUALITY CONTROL:

Functionally tested for RNA sample loading on agarose gel or polyacrylamide gel electrophoresis. Free of RNase and DNase contamination. This product has passed a quality control assay that verifies the absence of detectable levels of nuclease and ribonuclease activity.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Load 2x RNA Loading Dye with ethidium bromide	6 x 1 mL	**BA01403**

STORAGE CONDITIONS:
Shipping at room temperature. Store at 4-25°C for up to 12 months.
COMMENTS:
These products are for research use only.

Atlas Load 2x RNA Loading Dye

DESCRIPTION:

Atlas Load 2x RNA Loading Dye is recommended for the preparation of RNA samples and RNA Ladders for electrophoresis on agarose or polyacrylamide gels. The ready-to-use solution contains electrophoresis tracking dyes as bromophenol blue and xylene cyanol FF. sThis dye contains formamide as the denaturing agent and RNA stabilizer.

COMPOSITION:

0.025% Bromphenol Blue, 0.025% Xylene Cyanol FF, 95% formamide, 0.5mM EDTA, 0.025% SDS.

QUALITY CONTROL:

Functionally tested for RNA sample loading on agarose gel or polyacrylamide gel electrophoresis. Free of RNase and DNase contamination. This product has passed a quality control assay that verifies the absence of detectable levels of nuclease and ribonuclease activity.

Ordering Information		
Product	**Quantity**	**Cat. #**
Atlas Load 2x RNA Loading Dye	6 x 1 mL	**BA01404**

STORAGE CONDITIONS:
Shipping at room temperature. Store at 4-25°C for up to 12 months.
COMMENTS:
These products are for research use only.

Atlas ClearSight Tablets

APPLICATIONS:

- Ideal for routine DNA and RNA gel electrophoresis and blotting assays
- Used dye is non-carcinogenic alternative to Ethidium bromide.

DESCRIPTION:

Atlas ClearSight Tablets contain everything necessary for an easy preparation of an agarose gel in desired gel percentage.
Atlas ClearSight Tablets are packed in a convenient blister pack.

ATLAS CLEARSIGHT TABLETS CONTAIN:

Agarose, TBE powder, Atlas ClearSight DNA stain.

Only RT or cooler pure water is needed to add for preparation of an agarose gel.

Do **NOT** *use hot water for dissolving the tablet*
Do **NOT** *add any buffer*

This composition is optimized to yield high resolution of sharp DNA bands with high sensitivity and low background.
Atlas ClearSight DNA Stain emits green fluorescence when bound to DNA or RNA. It has two secondary fluorescence excitation peaks (~270 nm; ~290 nm) and one strong excitation peak centered around 490 nm. The fluorescence emission is centered at ~530 nm. Thus, Atlas ClearSight DNA Stain is compatible with a wide variety of gel reading instruments.

Ordering Information		
Product	**Pack Size**	**Cat. #**
Atlas ClearSight Tablets	75 pcs	**BA50101**

STORAGE CONDITIONS:
Store at room temperature, protected from light.
COMMENTS:
This product is supplied for research use only.

SAFETY:

Caution when using hot, viscous solutions! Use suitable safety gear and open bottle gently to avoid accidents.
Atlas ClearSight DNA Stain is non-carcinogenic and according to the Ames test it causes significantly fewer mutations than Ethidium bromide. All working solutions can be disposed in regular trash.

PROTOCOL:

- Use the bottle or flask that is at least 3 times of the volume of the solution being prepared.
- Add an appropriate number of agarose tablets in the **water** and do **NOT** add any buffer! See the table below to achieve needed gel percentage.

Gel %	1 tablet	2 tablets
1%	50 ml water	100 ml water
1,5%	33 ml water	67 ml water

- Soak the tablet in the pure **water** for 3-5 minutes (or until it is dissolved) before heating.
- For tablet dissolving use water which is at room temperature, **DO NOT** use hot water.
- Heat the solution until it is clear and visually all the particles are dissolved.
- Cool the gel to 60-70ºC and cast the gel, into the gel tray.
- The thickness of gel should be**<0.5cm**.
- Run the gel in TBE running buffer.
- Detect the bands under Blue light or UV illuminator.

NOTES:

Atlas ClearSight DNA Stain is non-carcinogenic but may irritate skin and eyes. Please wear gloves while handing

ORDER FORM

GENERAL INFORMATION

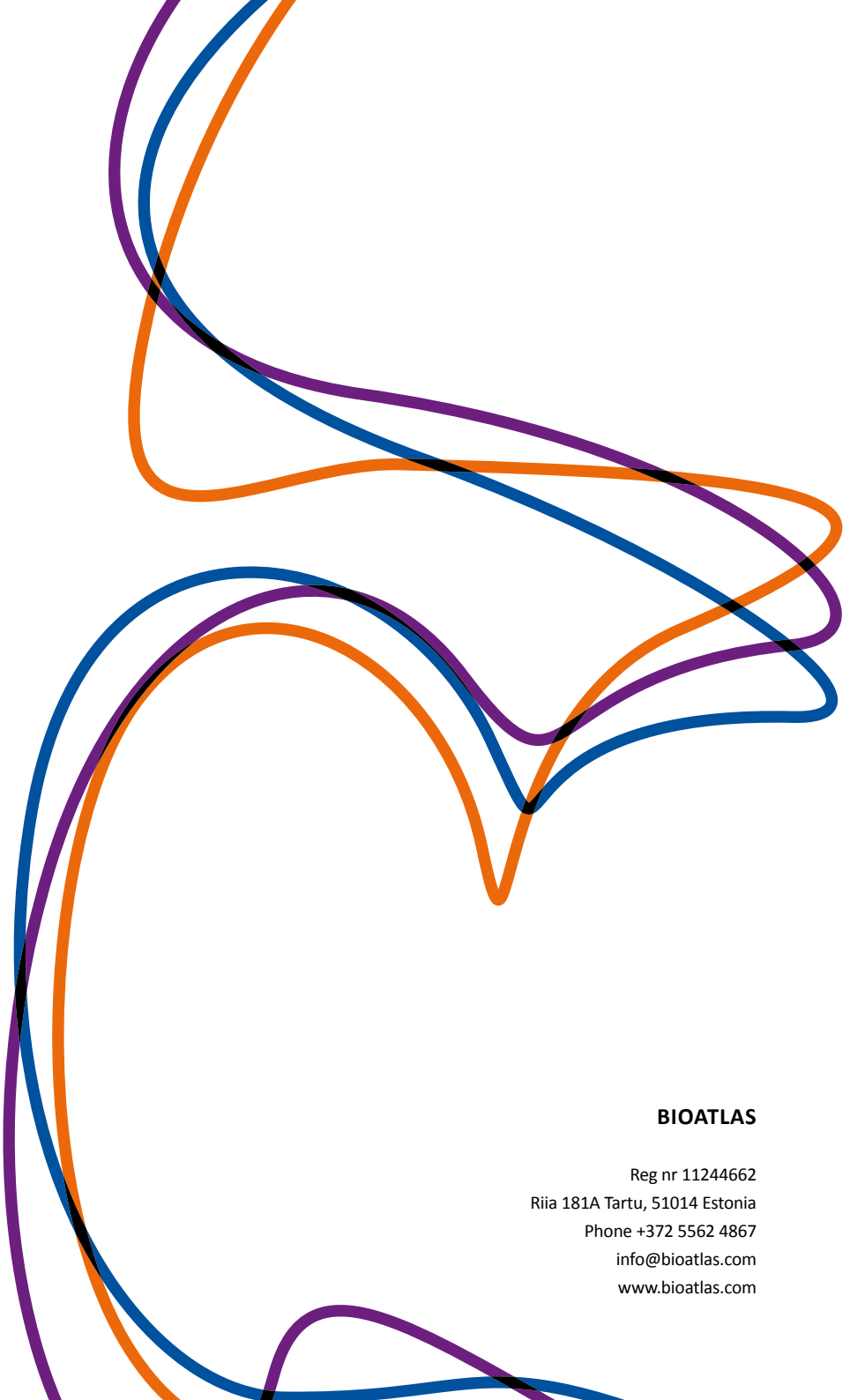
Date of order	
Order number (PO#)	
Name of the organization	
Name of the contact person	
E-mail of the contact person	
Phone of the contact person	
Delivery and Invoicing address (please indicate two, in case they differ)	
VAT number	
COMMENTS	

ORDER INFORMATION

DELIVERY OPTION ☐ Courier ☐ Regular Post

Product name	Cat #	Quantity *
AtlasTaq DNA Polymerase 500 U	BA00103	
Atlas Taq DNA Polymerase 1000 U	BA00104	
Atlas Taq DNA Polymerase 2500 U	BA00105	
Atlas HotTaq DNA Polymerase 500 U	BA00203	
Atlas HotTaq DNA Polymerase 1000 U	BA00204	
Atlas HotTaq DNA Polymerase 2500 U	BA00205	
Atlas RedTaq DNA Polymerase 500 U	BA00303	
Atlas RedTaq DNA Polymerase 1000 U	BA00304	
Atlas RedTaq DNA Polymerase 2500 U	BA00305	
Atlas Pfu DNA Polymerase 500 U	BA00503	
Atlas Pfu DNA Polymerase 1000 U	BA00504	
Atlas Pfu DNA Polymerase 2500 U	BA00505	
Titan Taq DNA Polymerase 500 U	BT10101	
Titan Taq DNA Polymerase 1000 U	BT10102	
Titan Taq DNA Polymerase 2500 U	BT10103	
Titan HotTaq DNA Polymerase 500 U	BT10201	
Titan HotTaq DNA Polymerase 1000 U	BT10202	
Atlas H Minus M-MLV Reverse Transcriptase 10000 U	BT10902	
Atlas Taq 2x PCR Mix (100 rxn)	BA01501	
Atlas HotTaq 2x PCR Mix (100 rxn)	BA01503	
Atlas RedTaq 2x PCR Mix (100 rxn)	BA01507	
Titan Taq 5x PCR Mix 12.5 mM 1 mL (250 rxn)	BT10402	
Titan Taq 5x PCR Mix Ready-to-Load 12.5 mM 1 mL (250 rxn)	BT10502	
Titan HotTaq Power Mix, Ready to load 1 mL (250 rxn)	BT10801	
Titan HotTaq Probe qPCR Mix (ROX) 1 mL (250 rxn)	BT11001	
Titan HotTaq Probe qPCR Mix (no ROX) 1 mL (250 rxn)	BT11002	
Titan HotTaq Probe qPCR Capillary Mix 1 mL (250 rxn)	BT11003	
Titan HotTaq Probe qPCR Universal Mix 1 mL (250 rxn)	BT11004	
Titan HotTaq EvaGreen® qPCR Mix (ROX) 1 mL (250 rxn)	BT11101	
Titan HotTaq EvaGreen® qPCR Mix (no ROX) 1 mL (250 rxn)	BT11102	
Titan HotTaq EvaGreen® qPCR Capillary Mix 1 mL (250 rxn)	BT11103	
Titan HotTaq EvaGreen® qPCR Universal Mix 1 mL (250 rxn)	BT11104	
Titan HotTaq EvaGreen® HRM Mix (ROX) 1 mL (250 rxn)	BT11201	
Titan HotTaq EvaGreen® HRM Mix (no ROX) 1 mL (250 rxn)	BT11202	
Atlas PCR Water 10 x 1.8 mL	BA01201	
Atlas PCR Water 25 x 1.8 mL	BA01202	
Atlas PCR Water 5 x 10 mL	BA01203	
Atlas DEPC-treated Water 5 x 1.8 mL	BA01204	
Atlas 25 mM $MgCl_2$ 1.8 mL	BA00153	
Atlas 25 mM $MgCl_2$ 5 x 1.8 mL	BA00154	
Atlas 10x Taq Buffer 1.8 mL	BA00151	
Atlas 10x Taq Buffer with $(NH_4)2SO_4$ 1.8 mL	BA00152	
Atlas 10 mM Nucleotide Mix 1 mL	BH40201	
Atlas 2 mM Nucleotide Mix 1 mL	BH40202	
Atlas dNTP Set (100 mM each) 4 x 400 µL	BH40203	
Atlas dNTP Set (100 mM each) 4 x 1 mL	BH40204	
Atlas dUTP Nucleotide (100 mM) 25 µmol (250 µL)	BT10601	
Atlas Star 100 bp DNA Ladder EXPRESS 500 µL	BA01302	
Atlas Star 100 bp DNA Ladder 500 µL	BA01304	
Atlas Star 1Kb DNA Ladder EXPRESS 500 µL	BT10701	
Atlas Agarose Ultra Pure 100 g	BA01101	
Atlas Agarose Ultra Pure 500 g	BA01102	
Atlas Ethidium Bromide Solution, 1% 10 mL	BA01901	
Atlas Ethidium Bromide Solution, 1% 5 x 1 mL	BA01902	
Atlas ClearSight DNA Stain 1 mL	BH40501	
Atlas ClearSight RNA Stain 0.4 mL	BH40601	
Atlas Load 6x Loading Dye Bromophenol Blue 6 x 1 mL	BA01401	
Atlas Load 6x Loading Dye Orange G 6 x 1 mL	BA01402	
Atlas Load 2x RNA Loading Dye with ethidium bromide 6 x 1 mL	BA01403	
Atlas Load 2x RNA Loading Dye 6 x 1 mL	BA01404	
Atlas ClearSight Tablets 75 pcs	BA50101	

* Bioatlas offers flexible packaging. We recommend ordering optimal aliquots based on the actual usage. The standard aliquot is mentioned beside the product name, but we are able to deliver other volumes based on individual agreements.



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