

BIONIEER

## Enzymes from Bioneer

# For PCR, Reverse Transcription, RT-PCR and Ligation

### Novel PCR polymerases with unique performance features

Bioneer offers a wide range of enzymes for PCR, Reverse Transcription, Reverse Transcriptase PCR (RT-PCR) and DNA Ligation. Our *Top* DNA Polymerase is the fastest thermostable PCR polymerase on the market. We are the only company to use a novel “enzyme-mediated” HotStart in our enzymes. In addition, our *CycleScript* Reverse Transcriptase uses a Cyclic-RT reaction that allows for robust cDNA synthesis of the rarest transcripts.

For faster and easier reaction set up, the *AccuPower*® PreMix Series contains each enzyme and all other PCR contents in an easy to resuspend lyophilized mix.

### Features and Benefits

Fast: Highly processive enzymes

Flexible: for all applications from standard, to high fidelity and long range and more!

Value: No license fees associated with our novel enzymes saves you money!

Choose the Bioneer Enzyme That's Right for You

	Application	DNA Polymerase			Hotstart DNA Polymerase		ProFi Taq DNA Polymerase	Reverse transcriptase		
		<i>Top</i>	<i>Taq</i>	<i>pfu</i>	<i>Top</i>	<i>Taq</i>		<i>MMLV</i> RT	<i>CycleScript</i> RTase	<i>RocketScript</i> Rtase
PCR	Standard PCR	√	√		√	√	√		√	
	Hotstart PCR			√	√	√				
	High-fidelity PCR			√			√			
	Long range PCR			√			√			
	High sensitivity				√					
	GC rich PCR				√	√				
	Multiplex PCR				√	√				
RT	Standard RT							√	√	√
	Cyclic RT								√	
	Standard RT/PCR									

Gentaur Sp. z o.o.  
Ogarna 15/19 B/2  
80-826 Gdańsk

## Specifications of Bioneer Enzymes

Product Name	Product size	Yield	Specificity	Fidelity	GC-rich	Heat Stability	Leaves 3'-A
<i>Top</i> DNA Polymerase	~ 10 kb	*****	****	***	***	***	Yes
<i>Taq</i> DNA Polymerase	~ 10 kb	*****	***	***	***	***	Yes
Hotstart DNA Polymerase	~ 12 kb	****	****	***	****	****	Yes
Hotstart <i>Taq</i> DNA Polymerase	~ 12 kb	****	****	***	****	****	Yes
ProFi <i>Taq</i> DNA Polymerase	~ 20 kb	****	****	***	****	****	Yes
<i>Pfu</i> DNA Polymerase	~ 10 kb	**	***	****	**	***	No
<i>M-MLV</i> Reverse Transcriptase	~ 9 kb	***	-	-	***	**	-
CycleScript Reverse Transcriptase	~ 9 kb	****	-	-	***	***	-
<i>RocketScript</i> Reverse Transcriptase	~ 10 kb	****	-	-	***	****	-

- DNA Polymerase
  - *Top* DNA Polymerase
  - HotStart DNA Polymerase
  - *Pfu* DNA Polymerase
  - *ProFi Taq* DNA polymerase
  - *Taq* DNA Polymerase
  - Hotstart *Taq* DNA Polymerase
- Reverse Transcriptase
  - *M-MLV* Reverse Transcriptase
  - CycleScript Reverse Transcriptase
  - *RocketScript*<sup>TM</sup> Reverse Transcriptase
- Ligase
  - T4 DNA Ligase
  - Thermostable *Thermus Filiformis* (Tfi) DNA Ligase
- Modifying enzyme
  - T7 RNA Polymerase
  - Restriction Enzyme
  - Protein Tyrosine Phosphatase(PTP)

### *Top* DNA Polymerase

Enzymes for everyday PCR, faster than *Taq* DNA Polymerase, and TA Cloning compatible

*Top* DNA polymerase is a novel thermostable DNA polymerase that is more processive than *Taq* DNA polymerase. In fact, the extension rate of *Top* DNA Polymerase is > 3 x that of *Taq* DNA Polymerase! *Top* DNA Polymerase can be used for a variety of PCR applications (including TA cloning) and is a robust enzyme for everyday PCR. It contains no proofreading or 5'-3' Exonuclease activity.

## Features and Benefits

Fast: More than three times more processive than standard *Taq* DNA Polymerase!

High performance: Amplifies fragments up to 10 kb!

Value: No license fee to pay!

<b>Cat. No.</b>	<b>Product description</b>	<b>Price net (EUR)</b>
D-3001	dNTP, 0.25 ml*4, 10 mM	102,00
E-3100	Top DNA Polymerase 500 units, 10 mM dNTPs, 10 X reaction buffer with MgCl <sub>2</sub>	167,00
E-3100-1	Top DNA Polymerase 500 units, 10 mM dNTPs, 10 X reaction buffer, 20 mM MgCl <sub>2</sub>	167,00
E-3100-2	Top DNA Polymerase 500 units, 10 X reaction buffer with MgCl <sub>2</sub>	134,50
E-3100-3	Top DNA Polymerase 500 units, 10 X reaction buffer, 20 mM MgCl <sub>2</sub>	134,50
E-3101	Top DNA Polymerase 2000 units, 10 mM dNTPs, 10 X reaction buffer with MgCl <sub>2</sub>	459,50
E-3101-1	Top DNA Polymerase 2000 units, 10 mM dNTPs, 10 X reaction buffer, 20 mM MgCl <sub>2</sub>	459,50
E-3101-2	Top DNA Polymerase 2000 units, 10 X reaction buffer with MgCl <sub>2</sub>	345,10
E-3101-3	Top DNA Polymerase 2000 units, 10 X reaction buffer, 20 mM MgCl <sub>2</sub>	345,10

[http://antibody-antibodies.com/product1090866-search-dNTP\\_%28mixtures%29\\_10mM\\_1ml%282.5\\_mMX4%29.html](http://antibody-antibodies.com/product1090866-search-dNTP_%28mixtures%29_10mM_1ml%282.5_mMX4%29.html)

[http://antibody-antibodies.com/product1090874-search-includes\\_10\\_mM\\_dNTP,\\_10\\_x\\_reaction\\_buffer\\_with\\_20\\_mM\\_MgCl2.html](http://antibody-antibodies.com/product1090874-search-includes_10_mM_dNTP,_10_x_reaction_buffer_with_20_mM_MgCl2.html)

[http://antibody-antibodies.com/product1090873-search-includes\\_10\\_mM\\_dNTP,\\_10\\_x\\_reaction\\_buffer,\\_20mM\\_MgCl2.html](http://antibody-antibodies.com/product1090873-search-includes_10_mM_dNTP,_10_x_reaction_buffer,_20mM_MgCl2.html)

[http://antibody-antibodies.com/product1090872-search-includes\\_10\\_x\\_reaction\\_buffer\\_with\\_MgCl2.html](http://antibody-antibodies.com/product1090872-search-includes_10_x_reaction_buffer_with_MgCl2.html)

[http://antibody-antibodies.com/product1090871-search-includes\\_10\\_x\\_reaction\\_buffer,\\_20\\_mM\\_MgCl2.html](http://antibody-antibodies.com/product1090871-search-includes_10_x_reaction_buffer,_20_mM_MgCl2.html)

[http://antibody-antibodies.com/product1090870-search-includes\\_10\\_mM\\_dNTPs,\\_10\\_x\\_reaction\\_buffer\\_with\\_20\\_mM\\_MgCl2.html](http://antibody-antibodies.com/product1090870-search-includes_10_mM_dNTPs,_10_x_reaction_buffer_with_20_mM_MgCl2.html)

[http://antibody-antibodies.com/product1090869-search-includes\\_10\\_mM\\_dNTPs,\\_10\\_x\\_reaction\\_buffer,\\_20\\_mM\\_MgCl2.html](http://antibody-antibodies.com/product1090869-search-includes_10_mM_dNTPs,_10_x_reaction_buffer,_20_mM_MgCl2.html)

[http://antibody-antibodies.com/product1090868-search-includes\\_10\\_x\\_reaction\\_buffer\\_with\\_MgCl2.html](http://antibody-antibodies.com/product1090868-search-includes_10_x_reaction_buffer_with_MgCl2.html)

[http://antibody-antibodies.com/product1090867-search-includes\\_10\\_x\\_reaction\\_buffer, 20 mM MgCl2.html](http://antibody-antibodies.com/product1090867-search-includes_10_x_reaction_buffer, 20 mM MgCl2.html)

### M-MLV Reverse Transcriptase from Bioneer

For cDNA Synthesis, RT-PCR, and qRT-PCR

*Moloney Murine Leukemia Virus (M-MLV) Reverse Transcriptase* is an RNA-dependent DNA polymerase. This enzyme is able to use an RNA molecule as a template and synthesize a double-stranded DNA. *M-MLV Reverse Transcriptase* is isolated from an *E.coli* strain containing a recombinant clone. It is ideal for use of first-strand synthesis cDNA from RNA molecules and for cDNA synthesis for Reverse Transcriptase PCR and qRT-PCR

#### Features and Benefits

Optimized 5X buffer: For more full length fragments - within 10 minutes

Full length cDNA: For genes up to 9 kb

RNase, DNase and Proteinase-free: Ensures the integrity of your samples

E-3121	M-MLV Reverse Transcriptase, 10,000 U, 5 X Reaction Buffer, 0.5 mL, 100 mM DTT, 0.3 mL, 10mM dNTPs mixture solution 0.2ml	128,00 €
E-3122	M-MLV Reverse Transcriptase, 50,000 U, 5 X Reaction Buffer, 2.5 mL, 100 mM DTT, 1.5 mL, 10mM dNTPs mixture solution 1ml	323,00 €

[http://antibody-antibodies.com/product1090860-search-Includes\\_5\\_X\\_reaction\\_buffer, 100 mM DTT.html](http://antibody-antibodies.com/product1090860-search-Includes_5_X_reaction_buffer, 100 mM DTT.html)

[http://antibody-antibodies.com/product1090859-search-5\\_tubes\\_of\\_10,000\\_Units\\_Includes\\_5\\_X\\_reaction\\_buffer, 100 mM DTT.html](http://antibody-antibodies.com/product1090859-search-5_tubes_of_10,000_Units_Includes_5_X_reaction_buffer, 100 mM DTT.html)

### T4 DNA Ligase from Bioneer

for ligation of DNA, TA cloning, and other recombinant DNA applications

T4 DNA Ligase catalyzes the formation of a phosphodiester bond between 5' phosphate and 3' hydroxyl termini in duplex DNA or RNA. This enzyme will ligate DNA from blunt-end and cohesive-end termini (Including sticky ends for TA Cloning) as well as repair single stranded nicks in duplex DNA, RNA, or DNA/RNA hybrids. T4 DNA Ligase is isolated from a recombinant *E.coli* strain.

### Features and Benefits

High Speed: DNA ligations in 5 minutes for cohesive end and in 10 minutes for blunt end DNA at 25°C

Flexibility: Suitable for all common DNA ligations

Reproducibility: Batch manufacturing under strict ISO 9001 quality control system

E-3061	T4 DNA Ligase, 20,000 U	89,00 €
E-3062	T4 DNA Ligase, 100,000 U(5 x 20,000 U)	209,90 €

[http://antibody-antibodies.com/product1090849-search-Includes\\_10\\_X\\_reaction\\_buffer,\\_100mM\\_MgCl2,\\_50mM\\_DTT,\\_10mM\\_ATP,\\_25\\_ug\\_mL\\_BSA.html](http://antibody-antibodies.com/product1090849-search-Includes_10_X_reaction_buffer,_100mM_MgCl2,_50mM_DTT,_10mM_ATP,_25_ug_mL_BSA.html)

[http://antibody-antibodies.com/product1090848-search-Includes\\_10\\_X\\_reaction\\_buffer,\\_100mM\\_MgCl2,\\_50mM\\_DTT,\\_10mM\\_ATP,\\_25\\_ug\\_mL\\_BSA.html](http://antibody-antibodies.com/product1090848-search-Includes_10_X_reaction_buffer,_100mM_MgCl2,_50mM_DTT,_10mM_ATP,_25_ug_mL_BSA.html)

### T7 RNA Polymerase from Bioneer

T7 RNA Polymerase is isolated from *E.coli* cells containing the ligase gene cloned from T7 bacteriophage.

T7 RNA Polymerase is a DNA dependent RNA polymerase with a highly specificity for the initiation of transcription at T7 RNA polymerase promoters. It is widely used for the rapid synthesis in vitro of specific RNAs.

### Features and Benefits

Source: T7 RNA Polymerase is isolated from *E.coli* cells containing the ligase gene cloned from T7 bacteriophage.

E-3041	T7 RNA Polymerase, 2,000 U	89,00 €
E-3042	T7 RNA Polymerase, 10,000 U(5 x 2,000 U)	209,90 €

Links:

[http://antibody-antibodies.com/product1090851-search-T7\\_RNA\\_Polymerase\\_Includes\\_10\\_X\\_reaction\\_buffer,\\_100\\_mM\\_DTT.html](http://antibody-antibodies.com/product1090851-search-T7_RNA_Polymerase_Includes_10_X_reaction_buffer,_100_mM_DTT.html)

[http://antibody-antibodies.com/product1090850-search-T7\\_RNA\\_Polymerase\\_Includes\\_10\\_X\\_reaction\\_buffer,\\_100\\_mM\\_DTT.html](http://antibody-antibodies.com/product1090850-search-T7_RNA_Polymerase_Includes_10_X_reaction_buffer,_100_mM_DTT.html)