



RBC Polymerases



RBC SensiZyme™ HotStart Taq Premix / Bluemix Ready To Use

Cat.No. RT008 / RT0083

V2.0



RBC Bioscience

RBC SensiZyme™ HotStart Taq Premix

Cat.No. RT008

2X RBC SensiZyme™ HotStart Taq Premix:

500 µl x 5 vials

50mM MgCl₂: 1ml x 1 vial

20mM KCl, 3mM MgCl₂, 20mM Tris-HCl (pH8.3),
0.2mg/ml BSA, 20mM (NH₄)₂SO₄, 0.4mM dNTP mix,
0.15U/µl SensiZyme Hotstart Taq, stabilizer.

RBC SensiZyme™ HotStart Taq Bluemix

Cat.No. RT0083

2X RBC SensiZyme™ HotStart Taq Bluemix:

500 µl x 5 vials

20mM KCl, 3mM MgCl₂, 20mM Tris-HCl (pH8.3),
0.2mg/ml BSA, 20mM (NH₄)₂SO₄, 0.4mM dNTP mix,
0.15U/µl SensiZyme™ Hotstart Taq, stabilizer, blue dye.

Description

RBC SensiZyme™ Hotstart Taq DNA polymerase Premix / Bluemix is a ready-to-use premix. It is convenient for amplification of DNA fragments without the need for thawing individual components. It also reduces the risk of contamination and pipetting errors.

RBC SensiZyme™ Hotstart Taq DNA polymerase Premix / Bluemix contains RBC SensiZyme™ Taq DNA polymerase, in an inactive state with no polymerase activity at ambient temperature therefore preventing the formation of misprimed products or primer-dimers at low temperature. This Premix / Bluemix utilizes a Mg²⁺ base reaction buffer system and contains all the nucleotides and reagents necessary to perform a standard reaction.

RBC SensiZyme™ Hotstart Taq DNA polymerase Premix can also be used in Real-Time reaction with Mg²⁺ regulation.

RBC SensiZyme™ Hotstart Taq DNA Polymerase Bluemix contains a blue color dye and precipitant for loading onto the gel directly. These components will not affect the amplification reaction but also can reduce overall procedure time and the risk of amplicon contamination. RBC SensiZyme™ Hotstart Taq DNA Polymerase Bluemix will indicate the leading front of the DNA sample on an electrophoresis gel.

Storage Condition

RBC SensiZyme™ Hotstart Taq DNA Polymerase Premix / Bluemix must be stored at either -20°C or 4°C. Storage at 4°C avoids the necessity of thawing the mix before assembling the reaction. For long term storage, -20°C is recommended.

Recombinant	✓
5' to 3' Exonuclease	✓
3' to 5' Exonuclease	✗
Terminal dA Addition	✓
Endonuclease Free	✓

General Reaction Conditions

The following protocol is suggested as a starting point and guideline when using RBC SensiZyme™ Hotstart Taq DNA Polymerase Premix / Bluemix. This protocol is for a reaction volume of approximately 50µl. The reaction volume may be adjusted as desired.

- 1 Add the following components to a sterile microtube:

Components	Volume	Final Concentration
2X SensiZyme Bluemix	25 µl	1X
Forward primer (10 µM)	1-5 µl	0.2-1.0 µM
Reverse primer (10 µM)	1-5 µl	0.2-1.0 µM
Template DNA	0.5-10 µl	< 1µg
ddH ₂ O	to 50µl	

Optional Step:

For Real-Time reaction, the Mg²⁺ working concentration must be adjusted with the provided 50 mM MgCl₂. The best Mg²⁺ working concentration is 3.5-5.5 mM depending on Real-Time machine being used.

- 2 Mix the solution thoroughly by pipetting.
- 3 Program the thermal cycler according to machine instruction. Suggested reaction parameters for RBC SensiZyme™ Hotstart Taq DNA Polymerase Premix / Bluemix are as follows:

Segment	Number of cycles	Temperature	Duration
1	1	(Activation) 95°C	10 minutes
2	30 ~ 40	(Denaturation) 94°C	30-60 seconds
		(Annealing) 50-68°C	30-60 seconds
		(Extension) 72°C	1 minute/Kbp
3	1	(Final extension) 72°C	3 minutes

- 4 Analyze the amplification products by agarose gel electrophoresis and visualize by ethidium bromide staining.

Note: For research use only. Not for use in diagnostic or therapeutic procedures.

RBC Polymerases Product Information

Cat.No.	Recommended product	Specification
RT001/RTT01	RBC Taq DNA Polymerase with dNTPs	RBC Taq DNA Polymerase, 10X Reaction Buffer, 10mM dNTPs Mix
RT011/RTT11	RBC Taq DNA Polymerase	RBC Taq DNA Polymerase, 10X Reaction Buffer
RT003	RBC Hi DNA Polymerase with dNTPs	RBC Hi DNA Polymerase, 10X Reaction Buffer, 10mM dNTPs Mix
RT033	RBC Hi DNA Polymerase	RBC Hi DNA Polymerase, 10X Reaction Buffer
RT004	RBC Pfu DNA Polymerase	RBC Pfu DNA Polymerase, 10X Reaction Buffer
RT006	2X RBC Taq DNA Polymerase Mastermix	2X RBC Taq Mastermix, 50mM MgCl ₂
RT007/RT0071	2X Blue/Red Mix DNA Polymerase Mastermix	2X RBC Taq Bluemix / Redmix
RT008	RBC SensiZyme Hotstart Taq Premix	2X SensiZyme Hotstart Taq Premix, 50mM MgCl ₂
RT0081	RBC SensiZyme Hotstart Taq with dNTPs	SensiZyme Hotstart Taq, 10X SensiZyme Buffer, 10mM dNTPs Mix
RT0082	RBC SensiZyme Hotstart Taq	SensiZyme Hotstart Taq, 10X SensiZyme Buffer
RT0083	RBC SensiZyme Hotstart Taq Bluemix	2X SensiZyme Hotstart Taq Bluemix
RT009	RBC ThermOne Real-Time Premix (SYBR Green)	1ml X 5vials
RT010	RBC ThermOne Real-Time Premix (Probe Method)	1ml X 5vials

