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molecular biology GENESPIN

DATA SHEET

info@genespin.com - www.genespin.com

> XtraTaq Pol RTL (ready to load)

cat. no.	*amount*	*note*
XSTS-T5XRTL 250	250 units	5X XtraRTL Buffer
XSTS-T5RTL 1000	1000 units	5X XtraRTL Buffer
XSTS-T5XRTLw 250	250 units	5X XtraRTL Buffer w/o MgCl2
XSTS-T5XRTLw 1000	1000units	5X XraRTL Buffer w/o MgCl2

add nucleotide box

cat. no.	*amount*	*note*
XSTSn-T5XRTL 250	250 units	5X XtraRTL Buffer + dNTPs
XSTSn-T5XRTL 1000	1000 units	5X XtraRTL Buffer + dNTPs
XSTSn-T5XRTLw 250	250 units	5X XtraRTL Buffer w/o MgCl2 + dNTPs
XSTSn-T5XRTLw 1000	1000units	5X XtraRTL Buffer w/o MgCl2 + dNTPs

An highly processive, recombinant (from E.coli strain), thermostable DNA with a very high efficiency of 5'- 3' polymerase activity and 3´- 5' exonuclease (non-proofreading) activity. Xtra Taq Pol catalyzes the addition of mononucleotide units to the 3'-end of a primer chain, leading to the formation of DNA products that have 3'-overhanging A nucleotides (thus can be used in TA cloning). This enzyme remains funtional even after prolonged incubation steps at 95°C. The enzyme is supplied at 5U/µl and comes with 5X XtraRTL (Ready To Load) new buffer.
5X XtraRTL Reaction Buffer is a Genespin proprietary formulation, developed for standard and/or high-fidelity amplification of high-GC (>75%) templates. The buffer contain 7.5mM magnesium, PCR enhancers and thickening agents (vortex thoroughly prior to use).
5X XtraRTL Reaction Buffer contains Orange G dye that allows gel loading and electrophoresis of the sample directly from the PCR tube, without further manipulation. The Orange G dye migrates at the same rate as a duplex DNA fragment of approximately 50 Kbp and does not interfere with DNA migration when it is used as a loading dye for agarose gel electrophoresis.

FOR RESEARCH USE ONLY

UNIT DEFINITION
One unit is defined as the amount of enzyme required to incorporate 10 nanomoles of dNTPs into acid-insolubile material in 30 min at 74°C.

SHIPPING
Shipped in green ice.

STORAGE
Store at -20C°

SHELF LIFE
12 months

FORM
Liquid

CONCENTRATION
5U/ul

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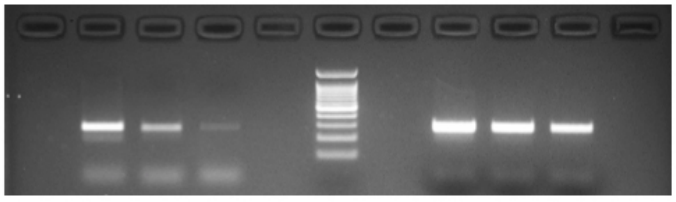
component	*STS-T5XRTL 250*	*STS-T5XRTLw250*	*STSn-T5XRTL250*	*STSn-T5XRTLw250*
Xtra Taq Polymerase	250 units / 50ul	250 units / 50ul	250 units / 50ul	250 units / 50ul
Standard Buffer	1.5ml 5X XtraRTL Buffer with MgCl2	1.5ml 5X XtraRTL Buffer w/o MgCl2MgCl2	1.5ml 5X XtraRTL Buffer with MgCl2MgCl2	1.5ml 5X XtraRTL Buffer w/o MgCl2Mg
MgCl2	-	500ul / 50mM	-	500ul / 50mM
dNTPs	-	-	100ul / 10mM each	100ul / 10mM each

component	*STS-T5XRTL1000*	*STS-T5XRTLw1000*	*STSn-T5XRTL1000*	*STSn-T5XRTLw1000*
Xtra Taq Polymerase	*1000* units / 200ul	*1000* units / 200ul	*1000* units / 200ul	*1000* units / 200ul
Standard Buffer	4ml 5X XtraRTL Buffer with MgCl2MgCl2	4ml 5X XtraRTL Buffer w/o MgCl2MgCl2MgCl2	4ml 5X XtraRTL Buffer with MgCl2MgCl2	4ml 5X XtraRTL Buffer w/o MgCl2MgCl2MgCl2
MgCl2	-	500ul / 50mM	-	500ul / 50mM
dNTPs	-	-	400ul / 10mM each	400ul / 10mM each

Assay Set-Up:

Before starting, vortex all components thoroughly to ensure homogeneity.
Prepare a premix for the number of assays you need according to the following protocol:

component	*stock conc.*	*final conc.*	*30ul reaction*
5X Buffer	5X	1X	6.0ul
dNTPs	10mM each.	200uM	0.6ul
Xtra Taq Polymerase	5U/ul	0.025U/ull	0.2ul
primers	1ug/ul each	50ng/ul each	2ul each
DNA Template	-	-	10-20ng
MG Water	-	-	up to 30ul



Competitor 5X XtraRTL

Comparisons of the amplification efficiency of new ***5X XtraWhite Buffer*** versus Competitor were performed using serial dilutions (1:10, 1:100, 1:1000) of Kiwi DNA and specific primers corresponding to pathogen PSA. The results are shown above. New 5X ***XtraWhite Buffer*** demonstrated excellent specificity and high efficiency in amplifying the pathogen.

Cycling conditions:

Spin down the tubes/plate briefly to remove bubbles and place them into the cycler.

denaturation	95°C	5 min	1x
denaturation	95°C	30 sec	20-35x
annealing (1)	50-68°C	30 sec	
extension (2)	72°C	30sec	

1)The annealing temperature depends on the melting temperature of the primers used.
2)The elongation time depends on the length of the fragments to be amplified. A time of 1 min/kb is recommended.