molecular biology GENESPIN DATA SHEET

> Taq Pol

cat. no.	*amount*	*note*
STS-T250	250 units	10X Standard Buffer
STS-T1000	1000 units	10X Standard Buffer
STS-Tw250	250 units	10X Standard Buffer w/o MgCl2
STS-Tw1000	1000units	10X Standard Buffer w/o MgCl2

add nucleotide box

cat. no.	*amount*	*note*
STSn-T250	250 units	10X Standard Buffer + dNTPs
STSn-T1000	1000 units	10X Standard Buffer + dNTPs
STSn-Tw250	250 units	10X Standard Buffer w/o MgCl2 + dNTPs
STSn-Tw1000	1000units	10X Standard Buffer w/o MgCl2 + dNTPs

Taq Pol is a highly processive, recombinant (isolated and purified from an E. coli strain), thermostable DNA polymerase with 5´→3´ polymerase activity, which catalyzes the addition of mononucleotide units to the 3'-OH end of a primer chain. This enzyme remains functional even after prolonged incubation steps at 95°C.

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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> Taq Pol

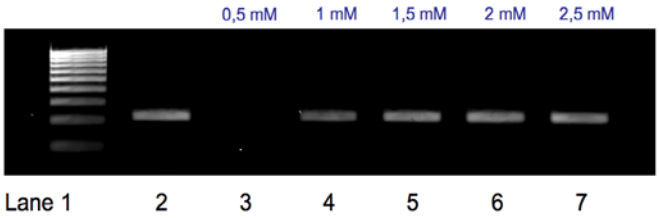
component	STS-T250	STS-Tw250	STSn-T250	STSn-Tw250
Taq Polymerase	250 units / 50ul	250 units / 50ul	250 units / 50ul	250 units / 50ul
Standard Buffer	1ml 10X Buffer with MgCl2	1ml 10X Buffer with MgCl2	1ml 10X Buffer with MgCl2	1ml 10X Buffer with MgCl2
MgCl2	-	500ul / 50mM	-	500ul / 50mM
dNTPs	-	-	100ul / 10mM each	100ul / 10mM each

component	STS-T1000	STS-Tw1000	STSn-T1000	STSn-Tw1000
Taq Polymerase	*1000* units / 200ul	*1000* units / 200ul	*1000* units / 200ul	*1000* units / 200ul
Standard Buffer	2ml 10X Buffer with MgCl2	2ml 10X Buffer with MgCl2	2ml 10X Buffer with MgCl2	2ml 10X Buffer with MgCl2
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
Standard Buffer	10X	1X	3.0ul
dNTPs	10mM each.	200uM	0.6ul
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



Amplification of a template DNA.
PCR* amplifications were carried out in a final reaction volume of 30ml using 1U StoS Taq Pol and either 1X Reaction Buffer WITH (Lane 2) or 1X Reaction Buffer W/O $MgCl_2$ and different final concentrations (0.5-2.5mM) of $MgCl_2$ (Lanes 3-7).

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.