Solis BioDyne
Data Sheet

SOLIScript RT cDNA synthesis KIT

Cat. No.	20 µl Reactions
06-35-0000S	50 rxn SAMPLE
06-35-00050	50
06-35-00200	200

For *in vitro* use only.

Description:

SOLIScript Reverse Transcriptase (RT) is an *in silico* designed chimeric RNA-directed DNA polymerase. **SOLIScript RT** can synthesize a complementary DNA strand from ssRNA or ssDNA and is active at higher temperatuures (up to 60°C). **SOLIScript RT** is a robust enzyme for RNA detection and has enhanced stability at room temperature with no activity loss for up to 1 month. This RT contains a RNase H domain with reduced activity.

Source:

Purified from an *E. coli* strain that carries an overproducing plasmid containing a *SOLIScript Reverse Transcriptase* gene.

Applications:

- First strand cDNA synthesis
- RT-PCR
- RT-qPCR

Reagents Provided:

- **SOLIScript Reverse Transcriptase**
- **RiboGrip RNase Inhibitor** (40 U/µl)
- **10x RT Reaction Buffer with DTT**
  500 mM Tris-HCl pH 8.3, 500 mM KCl, 30 mM $MgCl_2$, 100 mM DTT
- **Oligo (dT) Primer** (100 µM)
- **dNTP MIX** (20 mM of each)
- **Water, nuclease free**

SOLIScript Storage and Dilution buffer:

50% glycerol (v/v), 20 mM Tris-HCl pH 7.5 at 25°C, 100 mM KCl, 0.1 mM EDTA and stabilizers.

Quality control:

Free of endo- and exodeoxyribonucleases, phosphatases and ribonucleases. Activity and stability tested in first strand cDNA synthesis. SDS/PAGE - 82 kD monomer, >98% pure.

Shipping and Storage conditions:

Routine storage: -20°C
Shipping and temporary storage for up to 1 month at room temperature has no detrimental effects on the quality of the reagents.

Recommended quick protocol:

Thaw and mix the following reaction components in a nuclease-free microcentrifuge tube.

Component	Volume	Final conc. (20 µl)
Template RNA	0,1 ng - 1 µg	variable
Oligo(dT) primer (100 µM)/ gene specific primer	1 µl	5 µM 0,1-1 µM
dNTP MIX (20 mM of each)	0,5 µl	500 µM
10x RT Reaction Buffer with DTT	2 µl	1x
SOLIScript RT	1 µl	
RiboGrip RNase Inhibitor (40 U/µl)	0,5 µl	1 U/µl
Nuclease-free H_2O	Up to 20 µl	
Total	**20 µl**	

Use the following programme for cDNA synthesis:

Step	Temperature	Time
Reverse transcription*	50°C	30 min
Enzyme inactivation	85°C	5 min

*Reaction temperature may be increased to 55°C-60°C for gene-specific primer and difficult templates with high secondary structure. Incubation time at 50°C may be increased to 60 minutes for maximum yield

Recommended standard protocol:

Thaw and mix the following components in a nuclease-free microcentrifuge tube.

Component	Volume	Final conc. (20 µl)
Template RNA	0,1 ng - 1 µg	variable
Oligo(dT) primer (100 µM)/ gene specific primer	1 µl	5 µM 0,1-1 µM
Nuclease-free H_2O	Up to 16 µl	
Total	**16 µl**	

Incubate the template RNA and primer mix at 65°C for 5 min and then place on ice.

After a short spin add the following components.

Component	Volume	Final conc. (20 µl)
10x RT Reaction Buffer with DTT	2 µl	1x
dNTP MIX (20 mM of each)	0,5 µl	500 µM
SOLIScript RT	1 µl	
RiboGrip RNase Inhibitor (40 U/µl)	0,5 µl	1 U/µl
Total	**20 µl**	

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Step	Temperature	Time
Reverse transcription*	50°C	30 min
Enzyme inactivation	85°C	5 min

*Reaction temperature may be increased to 55°C-60°C for gene-specific primer and difficult templates with high secondary structure. Incubation time at 50°C may be increased to 60 minutes for maximum yield.

Safety warnings and precautions:

This product and its components should be handled only by persons trained in laboratory techniques. It is advisable to wear suitable protective clothing, such as laboratory overalls, gloves and safety glasses. Care should be taken to avoid contact with skin or eyes. In case of contact with skin or eyes, wash immediately with water.

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