



## FIREScript RT cDNA Synthesis MIX with Random primers

Cat. No.	20 µl Reactions
06-19-00100	100
06-19-00500	500

For *in vitro* use only.

### Description:

**FIREScript Reverse Transcriptase (RT)** is a genetically engineered MMLV (*Moloney Murine Leukemia Virus*) based Reverse Transcriptase. This is an RNA-directed DNA polymerase that can synthesize a complementary DNA strand from ssRNA or ssDNA and is active over a broad range of reaction temperatures from 37°C-50°C. FIREScript 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 functional RNase H domain which can increase the sensitivity of RT-qPCR (quantitative reverse transcription PCR).

### Source:

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

### Applications:

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

### Reagents Provided:

- **FIREScript Enzyme Mix**  
FIREScript RT and RiboGrip RNase inhibitor
- **10x RT Reaction Premix with Random primers**  
RT reaction buffer with DTT, dNTPs and Random primers
- **Water, nuclease free**

### Unit definition:

One unit is defined as the amount of enzyme that will incorporate 1 nmol of dTTP into acid-precipitable material in 10 minutes at 37°C using poly(rA)•oligo(dT) as template in a total reaction volume of 50 µl.

### FIREScript 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 - 74 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 protocol:

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

Component	Volume	Final conc.
Template RNA	0,1 ng - 5 µg	variable
10x RT Reaction Premix with Random primers	2 µl	1x
FIREScript Enzyme Mix	1,5 µl	
Nuclease-free H <sub>2</sub> O	Up to 20 µl	
<b>Total</b>	<b>20 µl</b>	

Use the following programme for cDNA synthesis:

Step	Temperature	Time
Primer annealing	25°C	5-10 min
Reverse transcription	50°C	30 min*
Enzyme inactivation	85°C	5 min

\*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.

**Permitted Use:** This product is supplied for research use only (the **Permitted Use**). If the customer wishes to use the product for any purpose other than the Permitted Use, including (without limitation) resale or alteration, the customer should obtain the appropriate licence from Solis BioDyne. Some applications of this product may require a license/licenses from one or more third parties which are not provided by the purchase of this product. Users should obtain the licence if required. Covered by the patent EP2501716, made by the methods of US Patent No 9,321,999.

**Warranty and Disclaimer:** This product shall comply with its relevant specification and be fit for its stated purpose, but Solis BioDyne gives no other warranty and makes no representation as to description or quality. Any such warranty or representation is excluded, to the fullest extent permitted by law. In particular, but without limiting the foregoing, Solis BioDyne shall not be liable for the failure of the product to comply with its relevant specification where such failure arises as a result of: (i) customer negligence or because the customer failed to follow any of the applicable technical data or safety sheets, standard user materials, use guidelines or any other information provided by Solis BioDyne as to the storage, transportation, handling, use or maintenance of the products or other good practice regarding the same, or (ii) the customer altering the products in any way without the prior written consent from Solis BioDyne, or (iii) the products differing from the relevant specification as a result of changes made to ensure their compliance with applicable statutory or regulatory requirements.

Nothing shall limit or exclude Solis BioDyne's liability for death or personal injury caused by its negligence, fraud or fraudulent misrepresentation or any matter in respect of which it would be unlawful for Solis BioDyne to exclude or restrict liability. Without limiting the foregoing, Solis BioDyne shall under no circumstances whatever be liable to the customer, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any loss of profit, or any indirect or consequential loss arising under or in connection with the products and Solis BioDyne's total liability to the customer in respect of all other losses arising under or in connection with the product, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, shall in no circumstances exceed the price of the products supplied in respect of which the liability has arisen.