

Jun 26, 2019 Version 1

Reverse transcription using SuperSript IV V.1

DOI

dx.doi.org/10.17504/protocols.io.4sngwde

Amin Mahpour¹

¹Harvard University



Amin Mahpour

Harvard Medical School, Massachusetts General Hospital

OPEN  ACCESS



DOI: dx.doi.org/10.17504/protocols.io.4sngwde

External link: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0205608>

Protocol Citation: Amin Mahpour 2019. Reverse transcription using SuperSript IV. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.4sngwde>

Manuscript citation:
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0205608>

License: This is an open access protocol distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working

Created: June 26, 2019

Last Modified: June 26, 2019

Protocol Integer ID: 25134

Keywords: Using SuperScript VI to produce cDNA from RNA

Materials

MATERIALS

 SuperScript™ IV Reverse Transcriptase Thermo Fisher Scientific Catalog #18090050

- Mix the following reagents from the kit. Please scale up if more RT reaction is desired.



Reagent	Amount (uL)
Primer (Random or dT)	0.5
dNTP (10mM)	1
RNA	11

- Incubate the mixture at **72 °C** for **00:02:00**. Then, incubate samples on ice for few minutes.



Note

This step allows denaturation of RNA and proper priming for the downstream cDNA synthesis.

- Mix the following reagents from the kit. Please scale up if more RT reaction is desired.



Reagent	Amount (uL)
RT Buffer (5x)	4
DTT (10mM)	1
RNAse Inhibitor	1

Add the 6uL to the 12.5uL mix from Step 3.



- Incubate the samples at **37 °C** for **00:05:00**. Then, add 1.5uL SuperScript RT IV enzyme to the reaction and mix well.



5 Incubate the samples using the following incubation settings:



	Temp (C)	Time (min utes)
	25	5
	45	40
	55	10
	75	10

5.1 Add 1uL RNase H to the cDNA samples and incubate at  37 °C for  00:20:00 .

5.2 Dilute the cDNA samples using Nuclease free water.