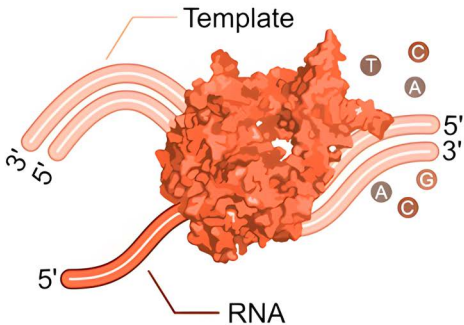




# T7 RNA Polymerase



T7 RNA Polymerase is an RNA polymerase present in T7 bacteriophage which transcribes RNA from DNA template under the control of T7 promoter with great specificity. This enzyme is the first choice for in vitro RNA production in the laboratory due its unique properties.

1- Mix the components as provided in the table below and incubate the reaction mixture for at least 1 hour at 37°C.

Component	Final Concentration	Volume
ATP (100mM)	0.5 mM	1 $\mu$ l
CTP (100mM)	0.5 mM	1 $\mu$ l
GTP (100mM)	0.5 mM	1 $\mu$ l
UTP (100mM)	0.5 mM	1 $\mu$ l
RNA Polymerase Reaction Buffer (10X)	1X	2 $\mu$ l
DNA Template	20 ng/ $\mu$ l	-
T7 RNA Polymerase	8 U/ $\mu$ l	3.2 $\mu$ l
RNase inhibitor *	1 U/ $\mu$ l	0.5 $\mu$ l
Pyrophosphatase *	0.002 U/ $\mu$ l	0.4 $\mu$ l
Nuclease Free Water	-	Up to 20 $\mu$ l

- \*Addition of these components are optional and can increase the reaction yield.

2- After the reaction, you can isolate RNA using commercial RNA clean up kits. Then store the sample at -80°C.