



Making mRNA production easier

A T7 RNA Polymerase Mutant that Can Significantly Reduce dsRNA Impurities

Chinese invention grant: ZL 2021 1 0044261.3

01

Low dsRNA impurities

03

High yield: 150-250µg mRNA/1µg template

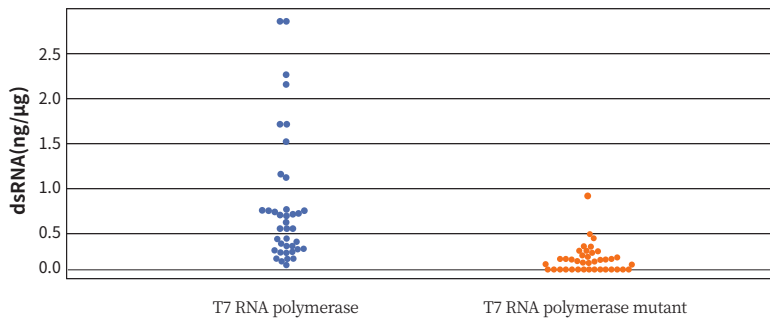
02

High capping efficiency

04

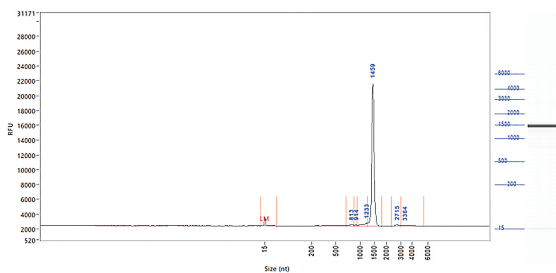
High integrity

T7 RNA polymerase mutant reduces dsRNA impurities significantly



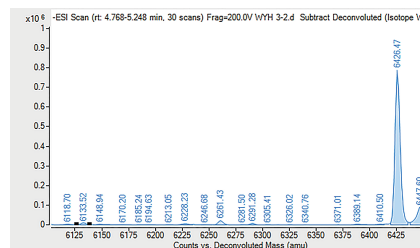
Novoprotein's patented product "T7 polymerase mutant" has been verified by hundreds of templates, and the dsRNA impurities is lower than 0.1ng/µl on most templates, and can be lower than 0.01ng/µl for RNA synthesized with modified nucleotides.

	Yield(µg)	Capping efficiency	Integrity	dsRNA impurities(ng/µg)
eGFP	220	98.56%	94.1%	0.015
Luciferase	183	99.97%	92.1%	0.060



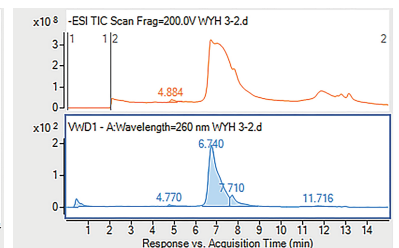
Peak	Relative concentration Percent	RFU	Concentration (ng/L)	Molarity (nmol/L)
1		1056	0.5951	119.8312
2	1.2	108	2.0592	7.8542
3	0.5	94	0.1972	3.1970
4	3.1	347	5.2642	14.4017
5	94.1	19141	161.1136	345.1397
6	0.8	145	1.3517	1.5481
7	0.3	21	0.5717	0.4532

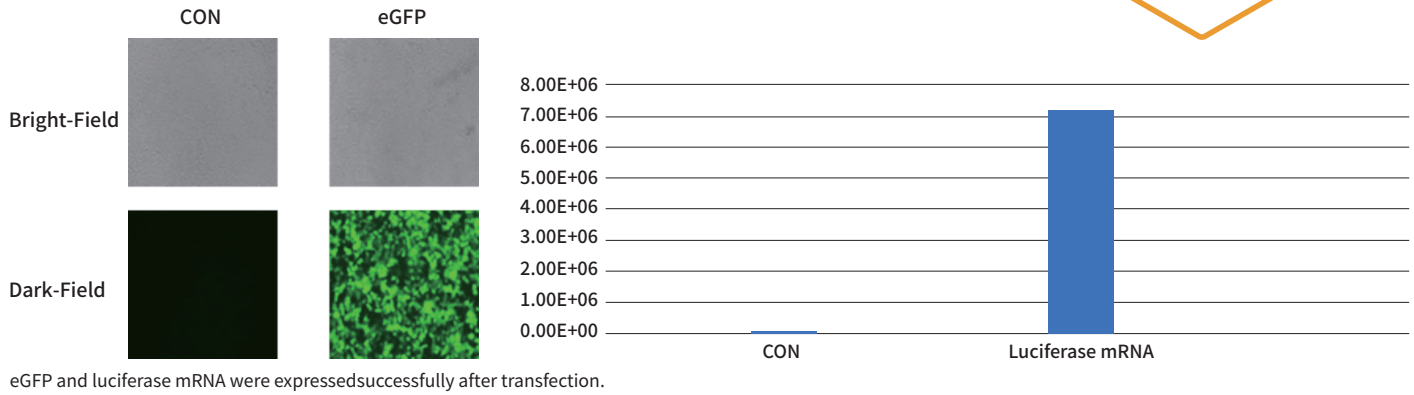
Capillary electrophoresis showed good integrity and high purity of the transcript.



Label	Mass	RT	Height	Area	Score	Min.Z	Max.Z	ID	Techniques Applied	File	ID Source	Mixing Algorithm	Use for Quant.	Area (AU)	% Quant (Area)	Height (AU)	% Quant (Height)
Biomolecule 7	6133.241		898		3	9		WH 3-2d				Manually added biomolec		44253	1.44	899	1.31
Biomolecule 1	6426.476	4.884	788112	1948304	3	9		WH 3-2d				Maximum Entropy Deconv		3022557	95.56	788112	95.87

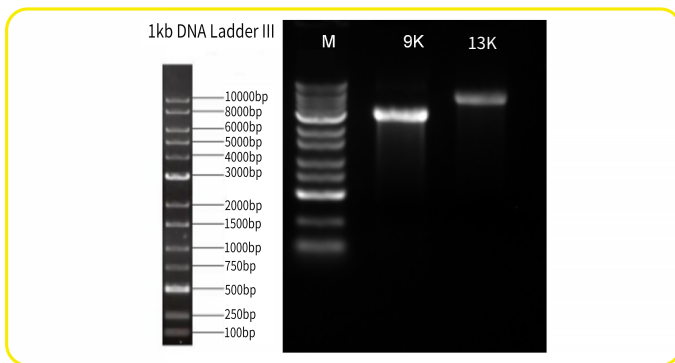
LC-MS detection shows high capping efficiency.



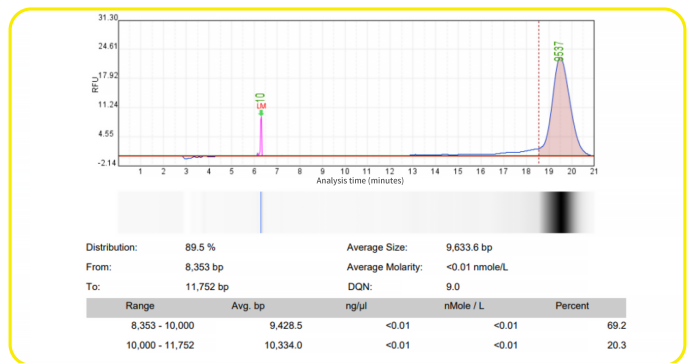


eGFP and luciferase mRNA were expressed successfully after transfection.

Suitable for saRNA Synthesis



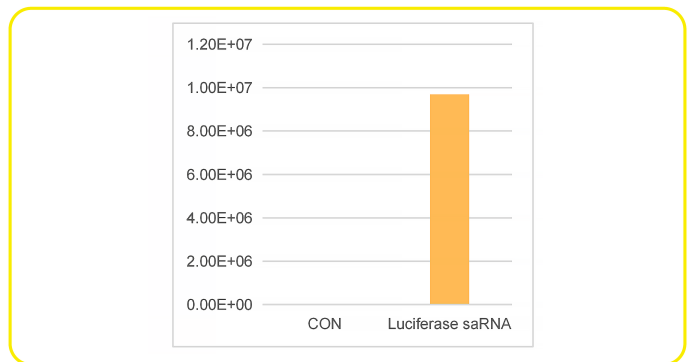
Agarose Gel Electrophoresis(AGE)



Capillary electrophoresis analysis showed 89.5% integrity



Capping Efficiency 99.92%



Cell Expression

Product List

Cat. No.	Product Name
GMP-E122-H200	T7 RNA Polymerase 2.0, GMP Grade
GMP-EB001	10× Co-Transcription Buffer, GMP Grade
E122	T7 RNA Polymerase 2.0
E332	T7 High Yield RNA Transcription kit 2.0
PA106	T7 RNA Polymerase 2.0 ELISA Kit

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