Report of Analysis

Product Name	Enhanced Green Fluorescent Protein mRNA (N1-Me-Pseudo UTP)
Catalog No.	EB-RNA002
Size	100 ug, 500 ug, 1 mg
Storage	–80 °C(Avoid freeze/thaw cycles)

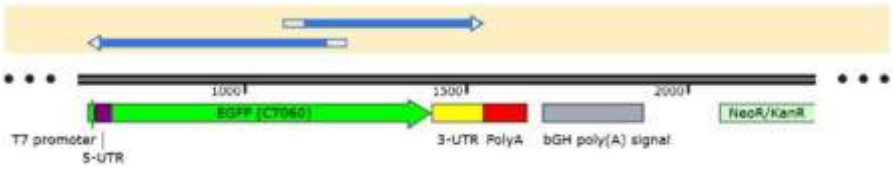
Specifications

Test Item	Method	Result
Appearance	USP<790>	Clear, colorless solution
pH	USP<791>	6.6
Content	UV-Vis	2.0 mg/mL
A260/280	UV-Vis	2.0
Identity	Sanger sequencing	ORF sequence 100% matches
Integrity	Capillary electrophoresis	93.5 %
Purity	RP-HPLC	87.5 %
Poly(A) tailed %	RP-HPLC	99.0 %
Capping efficiency	LC-MS	> 99.0 %
Residual protein	Fluorescence	< 1.0 μg/mg
Residual DNA template	qPCR	0.2 ng/mg
dsRNA	ELISA	159.1 ng/mg
Endotoxin	USP<85>	< 5 EU/mL
In vitro expression	SDS-Page	Expressed protein size matches expectation

- **Identity: Sanger sequencing**

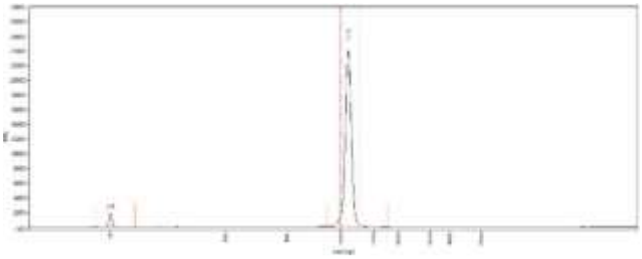
The sequence was successfully verified through Sanger sequencing, with the results confirming a 100% match with

the theoretical ORF sequence.



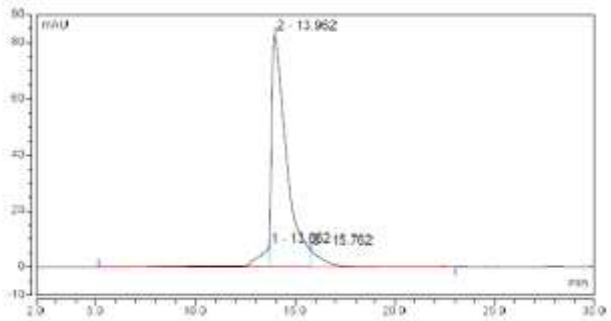
- **Integrity: Capillary electrophoresis**

Size range (nt)	Average size (nt)	Integrity (%)
996 - 1258	1111	93.5



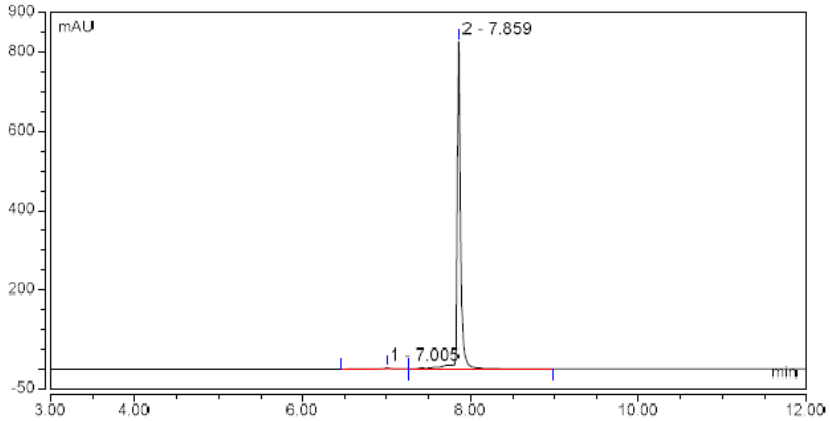
- **Purity: RP-HPLC**

RT (min)	Area	Area (%)
13.662	5.912	7.3
13.962	70.504	87.5
15.762	4.199	5.2



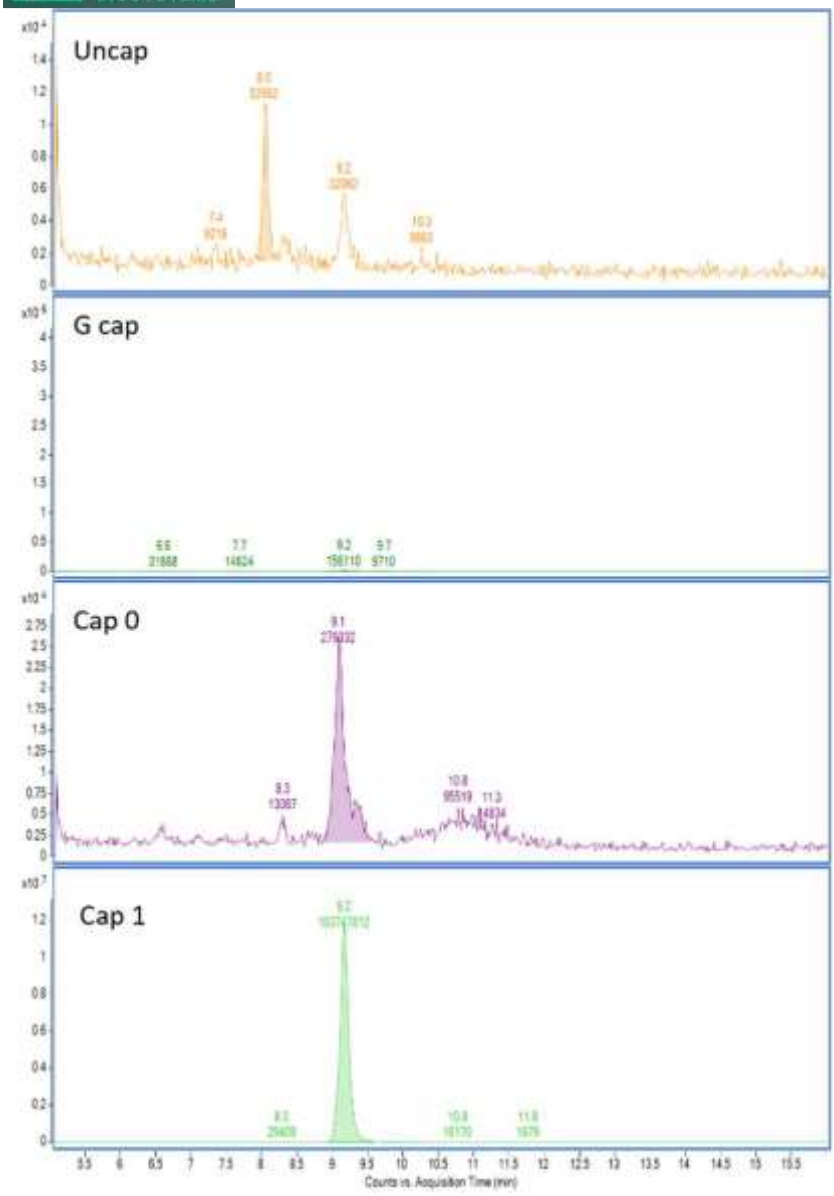
- **Poly(A) tailed %: RP-HPLC**

RT (min)	Area	Area (%)	Area (%)
Tailless	7.005	0.386	1.0
Tailed mRNA	7.859	39.552	99.0



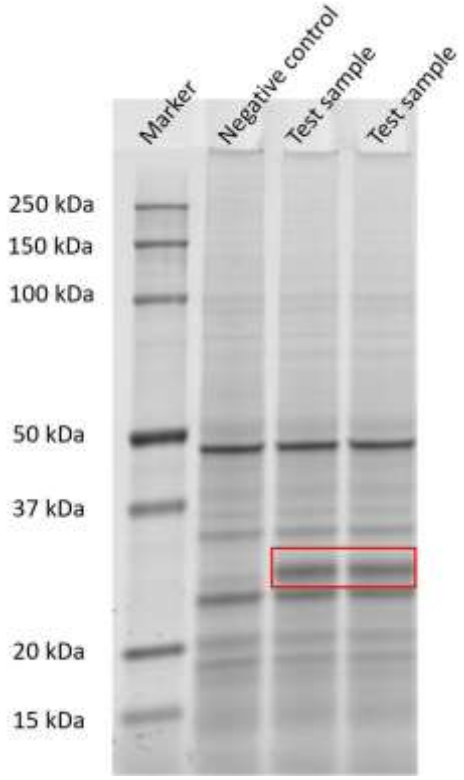
- **Capping efficiency: LC-MS**

Name	RT (min)	Area	Area (%)
Uncap (PPP)	8.0	52992	0.05
G cap	N.D.	N.D.	N.D.
Cap 0	9.1	276332	0.3
Cap 1	9.2	103747012	＞99.0



- **In vitro expression: cell-free translation**

The mRNA sample was translated using a cell-free translation system, and the resulting mixture was analyzed via SDSPAGE. The SDS-PAGE results confirm that this batch of mRNA successfully expressed protein, with the expressed proteins corresponding to the anticipated size of 27.0 kDa.



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