



## Report of Analysis

<b>Product Name</b>	CD19 CAR mRNA
<b>Catalog No.</b>	EB-RNA015
<b>Size</b>	100 ug
<b>Manufacturing Date:</b>	December 19, 2024
<b>Storage</b>	-80 °C(Avoid freeze/thaw cycles)
<b>Lot</b>	P24L018

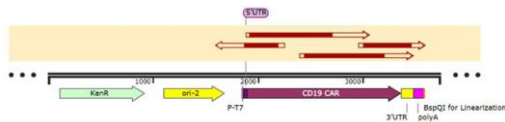
### Specifications

<b>Test Item</b>	<b>Method</b>	<b>Result</b>
Appearance	USP<790>	Clear, colorless solution
pH	USP<791>	6.52
Content	UV-Vis	5.0 mg/mL
A260/280	UV-Vis	1.9
Identity	Sanger sequencing	ORF sequence 100% matches
Integrity	Capillary electrophoresis	95.5%
Purity	RP-HPLC	91.5%
Poly(A) tailed %	RP-HPLC	98.3%
Capping efficiency	LC-MS	98.7%
Residual protein	Fluorescence	< 1.0 µg/mg
Residual DNA template	qPCR	< 0.01 ng/mg
dsRNA	ELISA	81.1 ng/mg
Endotoxin	USP<85>	< 10 EU/mL

In vitro expression	SDS-Page	Expressed protein size matches expectation
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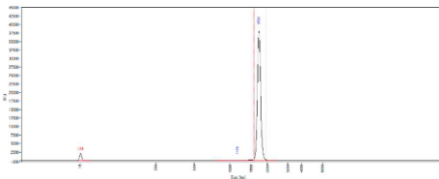
- Identity: Sanger sequencing**

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



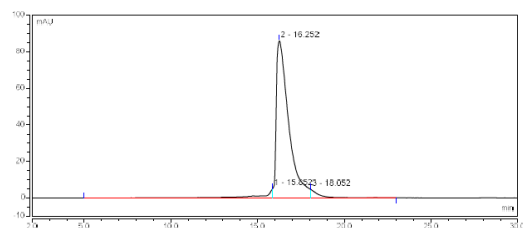
- Integrity: Capillary electrophoresis**

Size range (nt)	Average size (nt)	Integrity (%)
1571-1940	1736	95.5



- Purity: RP-HPLC**

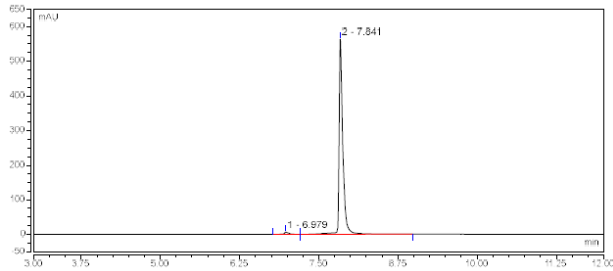
RT (min)	Area	Area (%)
15.852	4.036	5.1
16.252	73.039	91.5
18.052	2.790	3.5





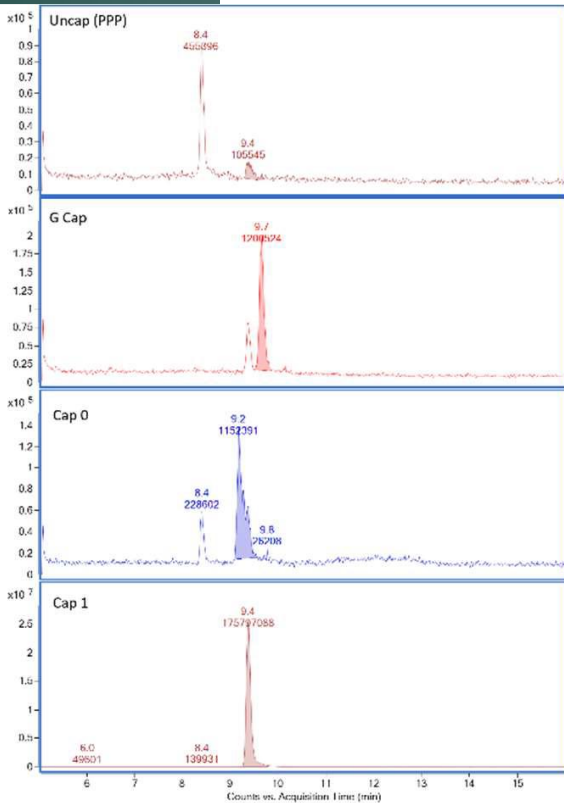
- **Poly(A) tailed %: RP-HPLC**

RT (min)	Area	Area (%)	Area (%)
Tailless	6.979	0.649	1.7
Tailed mRNA	7.841	38.328	98.3



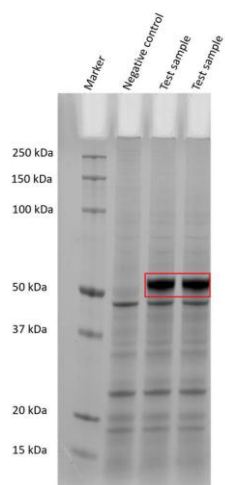
- **Capping efficiency: LC-MS**

Name	RT (min)	Area	Area (%)
Uncap (PPP)	N.D.	N.D.	N.D.
G cap	9.7	1200524	0.7
Cap 0	9.2	1152391	0.6
Cap 1	9.4	175797088	98.7



- In vitro expression: cell-free translation**

The mRNA sample was translated using a cell-free translation system, and the resulting mixture was analyzed via SDS-PAGE. The SDS-PAGE results confirm that this batch of mRNA successfully expressed protein, with the expressed proteins corresponding to the anticipated size of 53.1 kDa.





**Disclaimer:**

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The results of this report apply only to this batch of products.

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