

## Report of Analysis

Report Number	CLT24J005	Report Date	October 09, 2024
Sample Name	CatPure™ Cas9 mRNA	Lot Number	P24I009
Package Size	0.1, 0.5, 1.0 mg/tube	Manufacturing Date	September 26, 2024
Sample Source	CATUG	Receiving Date	September 27, 2024

Test	Method	Result
Appearance	USP <790>	Clear, colorless solution
Content	UV-Vis	2.0 mg/mL
A260/A280	UV-Vis	2.0
Identity	Sanger sequencing	ORF sequence 100% matches
Integrity	CE	88.9 %
% Poly A tailed	HPLC	96.0 %
5' capping efficiency	LC-MS	> 99.0 %
Poly(A) tail distribution	LC-MS	96-111 A
Residual protein	Fluorescence	< 1.0 µg/mg
Residual DNA template	qPCR	0.14 ng/mL
dsRNA	ELISA	54.5 ng/mg
Endotoxin	USP <85>	< 1 EU/mL
In vitro expression	SDS-page	Expressed protein size matches expectation

Reported By/Date: Zhengshuai Huang October 09, 2024 Reviewed By/Date: Jinyao Chen October 09, 2024

Approved By/Date: Fengjun Huang October 09, 2024

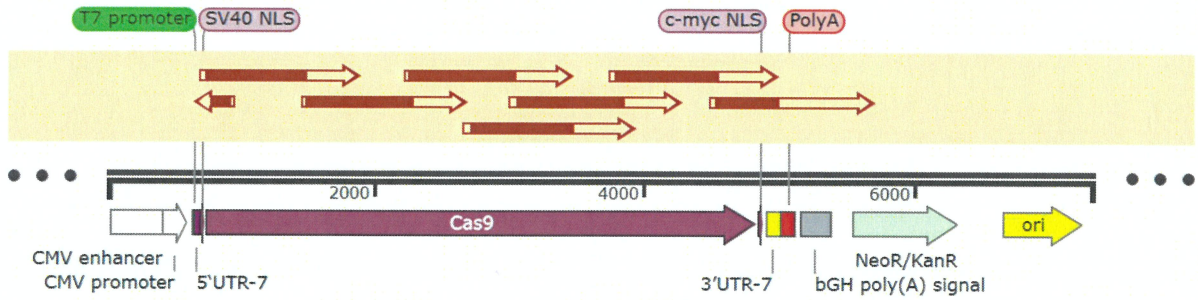
CATUG Life Technology (Suzhou) Co., Ltd.

Website: www.catug.bio

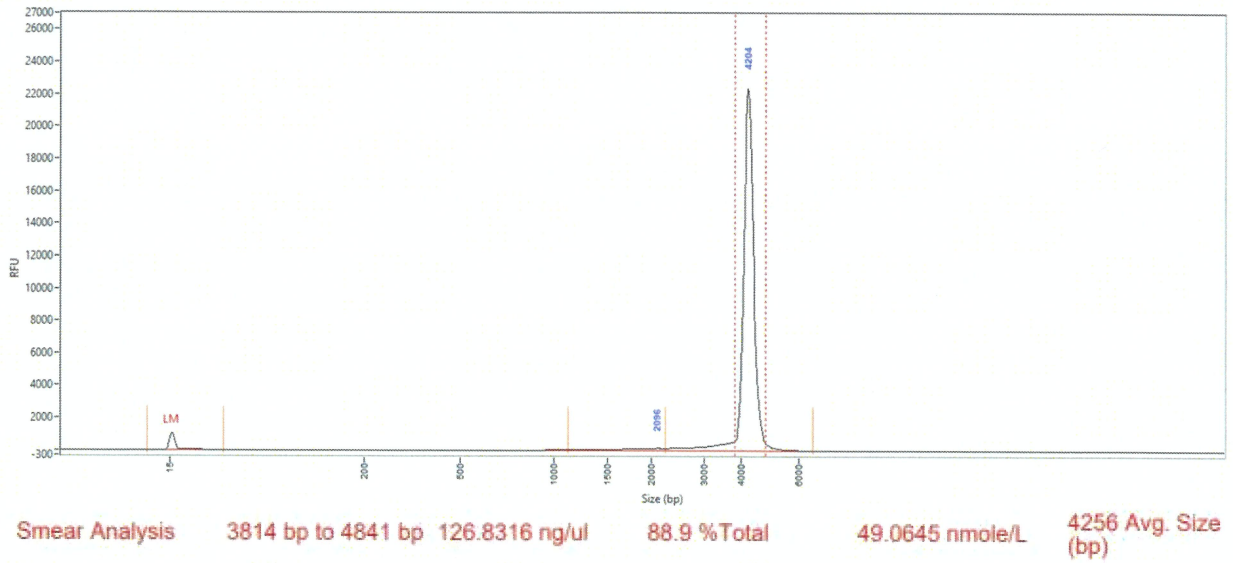
E-mail: info@catug.bio

Address: No. 288 Jiangyun Road, Industrial Park, Suzhou, Jiang

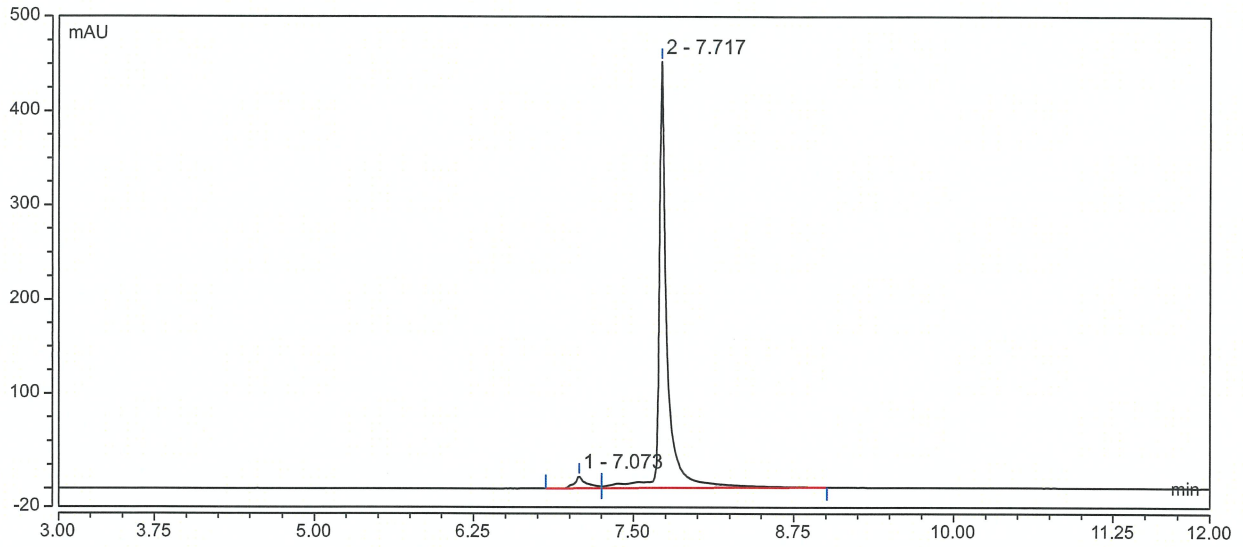
Identity - Sanger sequencing



Integrity - CE

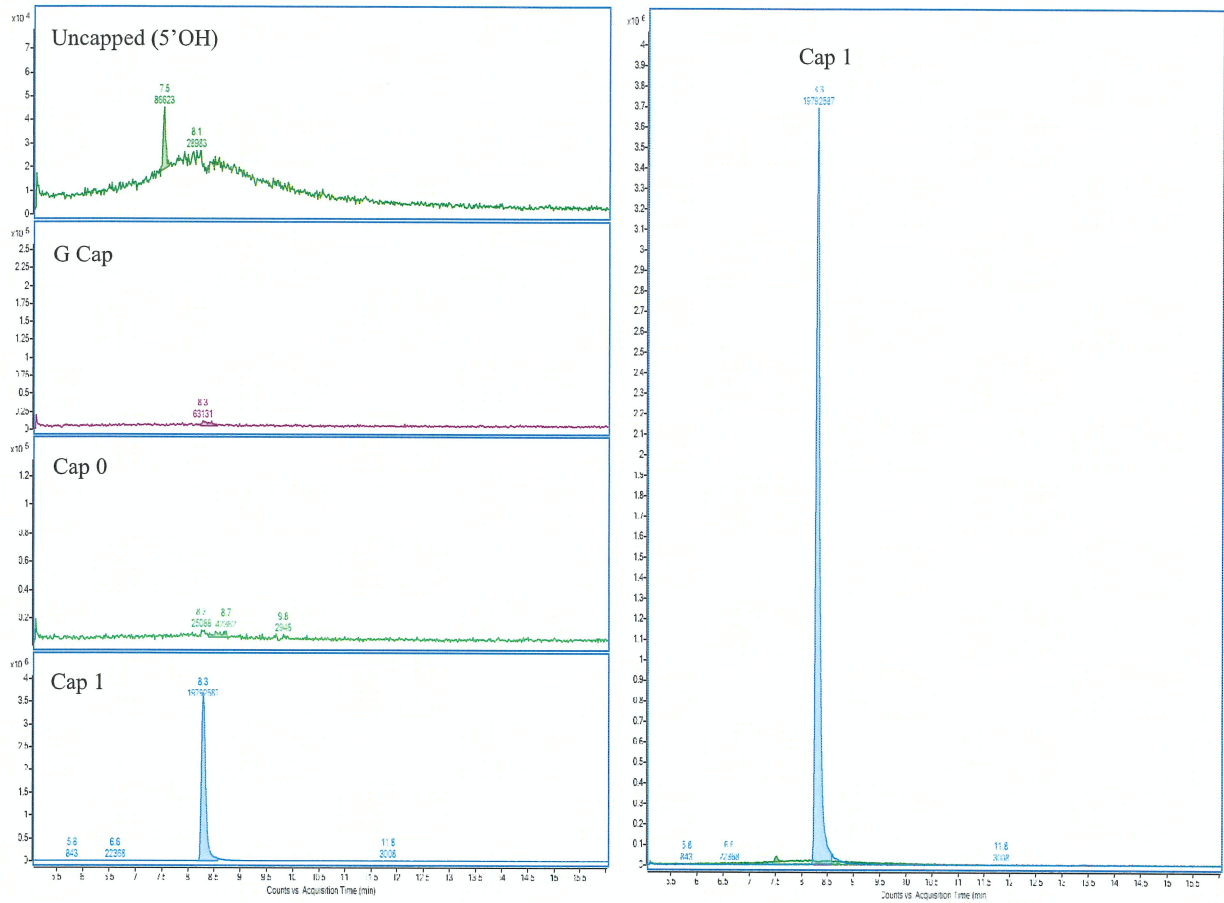


% Poly A tailed - HPLC



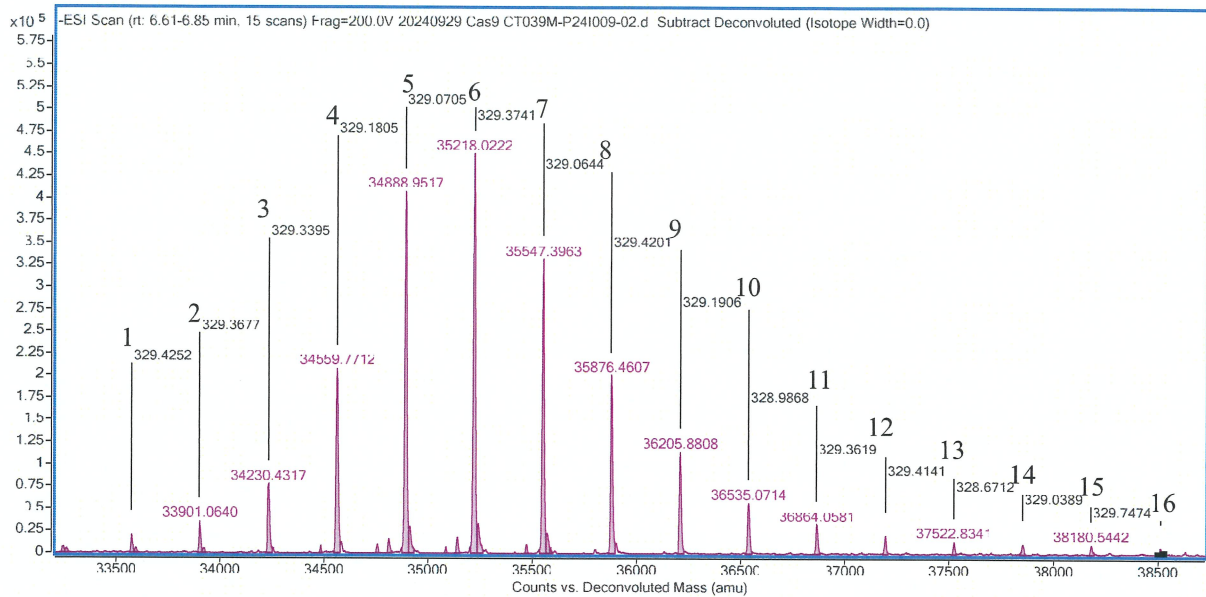
Name	RT (min)	Area	Area (%)
Tailless mRNA	7.073	1.411	4.0
Tailed mRNA	7.717	34.139	96.0

5' capping efficiency - LC-MS



Name	RT (min)	Area	Area(%)
Uncapped (5'OH)	7.5	86623	0.4
G Cap	N.D.	N.D.	N.D.
Cap 0	N.D.	N.D.	N.D.
Cap 1	8.3	19792587	> 99.0

Poly(A) tail distribution - LC-MS



NO.	Theoretical sequence	Theoretical average MW	Measured MW	Signal intensity	Signal intensity (%)
1	A <sub>96</sub> m1ΨCm1ΨAGp	33571.0115	33571.6388	19711	1.0
2	A <sub>97</sub> m1ΨCm1ΨAGp	33900.2178	33901.0640	35280	1.8
3	A <sub>98</sub> m1ΨCm1ΨAGp	34229.4242	34230.4317	76712	3.9
4	A <sub>99</sub> m1ΨCm1ΨAGp	34558.6305	34559.7712	207454	10.4
5	A <sub>100</sub> m1ΨCm1ΨAGp	34887.8369	34888.9517	406193	20.4
6	A <sub>101</sub> m1ΨCm1ΨAGp	35217.0432	35218.0222	448961	22.5
7	A <sub>102</sub> m1ΨCm1ΨAGp	35546.2496	35547.3963	330249	16.6
8	A <sub>103</sub> m1ΨCm1ΨAGp	35875.4559	35876.4607	199507	10.0
9	A <sub>104</sub> m1ΨCm1ΨAGp	36204.6623	36205.8808	113988	5.7
10	A <sub>105</sub> m1ΨCm1ΨAGp	36533.8687	36535.0714	56567	2.8
11	A <sub>106</sub> m1ΨCm1ΨAGp	36863.0750	36864.0581	32240	1.6
12	A <sub>107</sub> m1ΨCm1ΨAGp	37192.2814	37193.4200	20567	1.0
13	A <sub>108</sub> m1ΨCm1ΨAGp	37521.4877	37522.8341	13900	0.7
14	A <sub>109</sub> m1ΨCm1ΨAGp	37850.6941	37851.5053	11519	0.6
15	A <sub>110</sub> m1ΨCm1ΨAGp	38179.9004	38180.5442	10530	0.5
16	A <sub>111</sub> m1ΨCm1ΨAGp	38509.1068	38510.2916	7813	0.4

In vitro expression - SDS-Page

