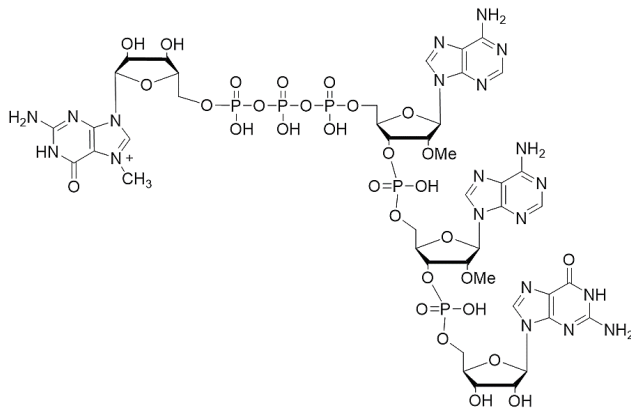


BRING YOUR RNA TO LIFE

Cap2 Analog



(m7G)(5') ppp(5')(2'O-me A)p(2'O-me A)pG

GAAG Cap2 Analog

Highlight

- Natural cap structure-Cap2
- Universal GAG template, compatible with various IVT reaction systems
- High yield and high cap efficiency

T7 Promoter

TAATACGACTCACTATAAGG ...

- GAAG cap primes to -1,+1&+2 positions of promoter
- The cap binds to the T7 promoter -1,+1&+2 sites to initiate transcription

IVT conditions

- 5mM each rNTP and Cap2 analog
- 50ug/ml Template
- 10KU/ml T7
- 0.5U/ml IPPA
- 200U/ml Rnase inhibitor
- 37° C 2hr

Template	RNA Yield (20μL reaction volume)	Capping Efficiency
prime to -1,+1&+2	100.8μg	99.11%

Contact us:

Hongene Biotech



www.hongene.com



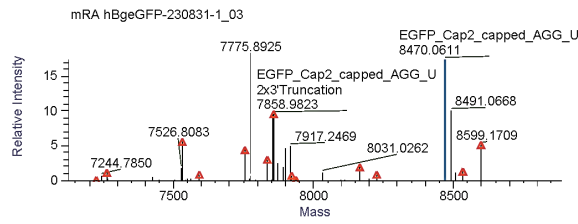
product.info@hongene.com



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Capping efficiency of different concentrations of Cap2 analogs under 5 mM rNTP IVT conditions

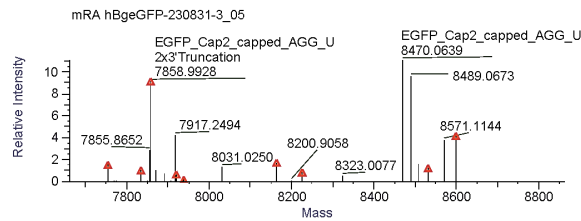
1mM Cap2 analog



Sequence Name	Modification	Monoisotopic Mass	Theoretical Mass (Da)	Matched Mass Error (ppm)	Average Mass	Sum Intensity	Fractional Abundance
EGFP_CAP2_uncapped_AGG_U	2x3'Truncation,1xPPP	7222.8155	7222.8589	6.0	7226.19	5.80E+05	0.09
EGFP_CAP2_uncapped_AGG_U	1xPPP	7833.8775	7833.9254	6.1	7837.54	9.60E+06	1.44
EGFP_CAP2_uncapped_AGG_U	1xPP	7753.9087	7753.9594	6.5	7757.53	1.35E+07	2.02
EGFP_Cap2_capped_AGG_U	2x3'Truncation,1xPhosphorylation	7939.2359	7939.0057	29.0	7942.95	8.45E+05	0.13
EGFP_Cap2_capped_AGG_U	2x3'Truncation,1xCyclic phosphorylation	7920.9538	7920.9952	5.2	7924.66	2.40E+06	0.36
EGFP_Cap2_capped_AGG_U	2x3'Truncation	7858.9823	7859.0394	7.3	7862.66	2.94E+07	4.40
EGFP_Cap2_capped_AGG_U	1xDIEA	8599.1709	8599.2580	10.1	8603.18	1.57E+07	2.35
EGFP_Cap2_capped_AGG_U	1xCyclic phosphorylation	8532.0278	8532.0618	4.0	8536.01	4.55E+06	0.68
EGFP_Cap2_capped_AGG_U	1x3'Truncation,1xCyclic phosphorylation	8225.9900	8226.0365	5.7	8229.83	3.18E+06	0.48
EGFP_Cap2_capped_AGG_U	1x3'Truncation	8164.0504	8164.0807	3.7	8167.87	6.07E+06	0.91
EGFP_Cap2_capped_AGG_U		8470.0611	8470.1060	5.3	8474.02	3.00E+08	44.86

Uncapped 2.37E+07
Capped 3.62E+08
Capping efficiency 93.86%

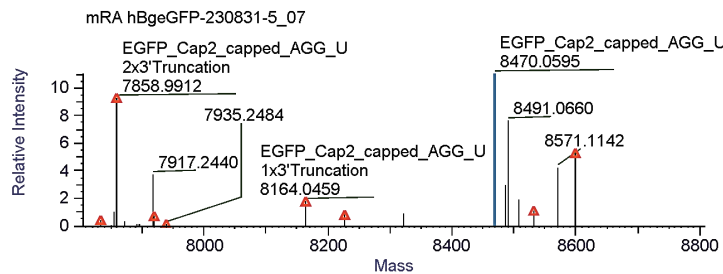
2.5mM Cap2 analog



Sequence Name	Modification	Monoisotopic Mass	Theoretical Mass (Da)	Matched Mass Error (ppm)	Average Mass	Sum Intensity	Fractional Abundance
EGFP_CAP2_uncapped_AGG_U	2x3'Truncation,1xPPP	7222.8206	7222.8589	5.3	7226.20	1.77E+05	0.02
EGFP_CAP2_uncapped_AGG_U	1xPPP	7833.8781	7833.9254	6.0	7837.54	4.55E+06	0.59
EGFP_CAP2_uncapped_AGG_U	1xPP	7753.9135	7753.9594	5.9	7757.54	6.26E+06	0.82
EGFP_Cap2_capped_AGG_U	2x3'Truncation,1xPhosphorylation	7939.2413	7939.0057	29.7	7942.95	9.67E+05	0.13
EGFP_Cap2_capped_AGG_U	2x3'Truncation,1xCyclic phosphorylation	7920.9589	7920.9952	4.6	7924.66	2.85E+06	0.37
EGFP_Cap2_capped_AGG_U	2x3'Truncation	7858.9928	7859.0394	5.9	7862.67	3.66E+07	4.79
EGFP_Cap2_capped_AGG_U	1xDIEA	8599.1691	8599.2580	10.3	8603.18	1.69E+07	2.21
EGFP_Cap2_capped_AGG_U	1xCyclic phosphorylation	8532.0201	8532.0618	4.9	8536.00	5.14E+06	0.67
EGFP_Cap2_capped_AGG_U	1x3'Truncation,1xCyclic phosphorylation	8225.9830	8226.0365	6.5	8229.83	3.61E+06	0.47
EGFP_Cap2_capped_AGG_U	1x3'Truncation	8164.0562	8164.0807	3.0	8167.87	7.06E+06	0.92
EGFP_Cap2_capped_AGG_U		8470.0639	8470.1060	5.0	8474.02	3.97E+08	51.83

Uncapped 1.10E+07
Capped 4.70E+08
Capping efficiency 97.71%

5mM Cap2 analog



Sequence Name	Modification	Monoisotopic Mass	Theoretical Mass (Da)	Matched Mass Error (ppm)	Average Mass	Sum Intensity	Fractional Abundance
EGFP_CAP2_uncapped_AGG_U	1xPPP	7833.8879	7833.9254	4.8	7837.55	2.15E+06	0.27
EGFP_CAP2_uncapped_AGG_U	1xPP	7753.9193	7753.9594	5.2	7757.54	2.37E+06	0.30
EGFP_Cap2_capped_AGG_U	2x3'Truncation,1xPhosphorylation	7939.2268	7939.0057	27.8	7942.94	1.01E+06	0.13
EGFP_Cap2_capped_AGG_U	2x3'Truncation,1xCyclic phosphorylation	7920.9428	7920.9952	6.6	7924.64	3.48E+06	0.45
EGFP_Cap2_capped_AGG_U	2x3'Truncation	7858.9912	7859.0394	6.1	7862.66	3.94E+07	5.04
EGFP_Cap2_capped_AGG_U	1xDIEA	8599.1890	8599.2580	8.0	8603.20	2.26E+07	2.90
EGFP_Cap2_capped_AGG_U	1xCyclic phosphorylation	8532.0218	8532.0618	4.7	8536.00	5.23E+06	0.67
EGFP_Cap2_capped_AGG_U	1x3'Truncation,1xCyclic phosphorylation	8225.9907	8226.0365	5.6	8229.84	3.85E+06	0.49
EGFP_Cap2_capped_AGG_U	1x3'Truncation	8164.0459	8164.0807	4.3	8167.86	7.76E+06	0.99
EGFP_Cap2_capped_AGG_U		8470.0595	8470.1060	5.5	8474.01	4.18E+08	53.54

Uncapped 4.51E+06
Capped 5.01E+08
Capping efficiency 99.11%