

FT-C2XCB0



Firefly Luciferase mRNA (5-moUTP)

Firefly Luciferase mRNA, modified with Cap 1 structure and 5-moUTP, enhances transcription efficiency and suppresses RNA-mediated innate immune activation.

Product Description

Catalog #:	C2XCB0, 100 µg	C2XCB1, 1x1 mg	C2XCB2, 5x1 mg
Name :	UptiCap™ Firefly Luciferase mRNA (5-moUTP)		
Modifications:	Cap 1, 5-moUTP, poly A		
Concentration:	1 mg/ml		
Physical Appearance :	White, almost white, yellow-like powder		
Buffer:	1 mM Sodium Citrate, pH 6.4		
Storage :	-80°C (6 months)		

For Research Use Only

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Technical and Scientific Information

What Is UptiCap Firefly Luciferase mRNA?

- UptiCap Firefly Luciferase mRNA is a synthetic molecule designed to express the luciferase protein once it enters cells.
- The luciferase protein is originally extracted from the firefly (*Photinus pyralis*).
- When luciferase catalyzes the oxidation of ATP-dependent D-luciferin, it produces chemiluminescence at approximately 560 nm wavelength.
- Firefly Luciferase is frequently used as a bioluminescent reporter for gene regulation and functional studies.

Capping and Modifications:

- UptiCap Firefly Luciferase mRNA is co-transcriptionally capped using UptiCap Reagent AG.
- The capping process generates a Cap 1 structure with high efficiency.
- Cap 1 structure is more ideal for mammalian systems and offers higher transcription efficiency compared to Cap 0 structures (such as ARCA and mCap).
- Additionally, the mRNA is modified with a poly(A) tail.

Benefits of Cap 1 Structure and Poly(A) Tail:

- Enhanced Transcription Efficiency: Cap 1 structure improves transcription efficiency, leading to higher luciferase expression.
- Stability and Lifetime: The poly(A) tail increases mRNA stability both in vitro and in vivo.
- Translation Efficiency: The poly(A) tail also enhances translation initiation.

Applications:

- UptiCap Firefly Luciferase mRNA finds applications in various assays:
- mRNA Delivery: Used for delivering mRNA into cells.
- Translation Efficiency Studies: Investigating protein translation rates.
- Cell Viability Assays: Assessing cell health.
- In Vivo Imaging: Visualizing gene expression in living organisms.

Concentration:

- UptiCap Firefly Luciferase mRNA is provided at a concentration of 1 mg/ml.



Ordering information

Catalog size quantities and prices may be found at <https://www.interchim.com>.

Please inquire for higher quantities (availability, shipment conditions).

Please contact InterBioTech – Interchim for any other information

Hotline : +33(0)4 70 03 73 06 – biosciences@advion-interchim.com

Disclaimer : Materials are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use.