

# PRODUCT INFORMATION



## Cre mRNA (Cap-1; m1Ψ)

Item No. 41963

### Overview and Properties

**Synonym:** EZ Cap™ Cre mRNA (N<sup>1</sup>-Methylpseudouridine)

**Storage:** -80°C (as supplied)

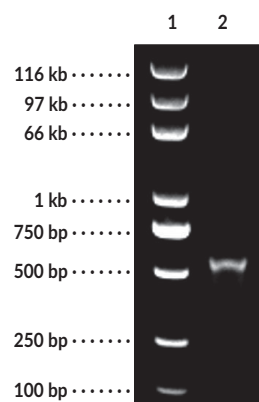
**Stability:** ≥2 years

**Supplied in:** 1 mM sodium citrate, pH 6.4

**Concentration:** 1 mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers  
Lane 2: R1030 mRNA

Cre mRNA (Cap-1; m1Ψ) was analyzed by 1.0% native TAE agarose gel.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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Cre mRNA (Cap-1; m1Ψ) encodes Cre, a bacteriophage tyrosine recombinase that catalyzes homologous recombination between two loxP sites in DNA.<sup>1</sup> It is capped using a co-transcriptional capping method, resulting in the naturally occurring Cap 1 structure with high capping efficiency. Cre mRNA is also polyadenylated and modified with N<sup>1</sup>-methylpseudouridine (m1Ψ) to reduce the host cell immune response and enhance mRNA stability. Encapsulation of Cre mRNA (Cap-1; m1Ψ) in lipid nanoparticles (LNPs) can be used for mRNA delivery and expression of Cre *in vitro* or *in vivo*.<sup>2</sup>

## References

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1. Rajewsky, K., Gu, H., Kühn, R., *et al.* Conditional gene targeting. *J. Clin. Invest.* **98**(3), 600-603 (1996).
2. Tanaka, H., Hagiwara, S., Shirane, D., *et al.* Ready-to-use-type lyophilized lipid nanoparticle formulation for the postencapsulation of messenger RNA. *ACS Nano* **17**(3), 2588-2601 (2023).

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