

PRODUCT INFORMATION



mCherry mRNA (Cap-1; m1Ψ)

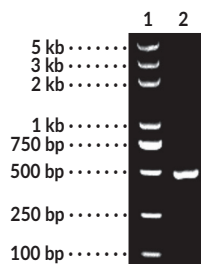
Item No. 41962

Overview and Properties

Synonym: N¹-Methylpseudouridine
Storage: -80°C (as supplied)
Stability: ≥6 months
Supplied in: 1 mM Sodium citrate, pH 6.4
Concentration: 1 mg/ml
EX./Em. Max: 587/610 nm

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

Image



Lane 1: Markers

Lane 2: R1047 mRNA

mCherry 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

mCherry mRNA (Cap-1; m1Ψ) encodes mCherry, a red fluorescent protein and derivative of *Discosoma* red fluorescent protein (DsRed) that displays excitation and emission maxima of 587 and 610 nm, respectively.¹ It is capped using a co-transcriptional capping method, resulting in the naturally occurring Cap 1 structure with high capping efficiency. mCherry mRNA is also polyadenylated and modified with N¹-methylpseudouridine (m1Ψ) to reduce the host cell immune response and enhance mRNA stability. Encapsulation of mCherry mRNA (Cap-1; m1Ψ) in lipid nanoparticles (LNPs) can be used for mRNA delivery and expression of mCherry fluorescent protein *in vitro* or *in vivo*.²

References

1. Shaner, N.C., Campbell, R.E., Steinbach, P.A., *et al.* Improved monomeric red, orange and yellow fluorescent proteins derived from *Discosoma* sp. red fluorescent protein. *Comparative Study* **22**(12), 1567-1572 (2004).
2. Hamilton, A.G., Swingle, K.L., Joseph, R.A., *et al.* Ionizable lipid nanoparticles with integrated immune checkpoint inhibition for mRNA CAR T cell engineering. *Adv. Healthc. Mater.* **12**(30), e2301515 (2023).

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