PRODUCT INFORMATION

mCherry mRNA (Cap-1; m1Ψ)

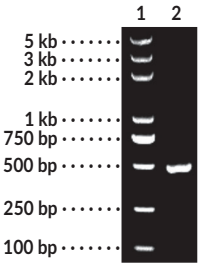
Item No. 41962

Overview and Properties

Synonym: N^1-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.

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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 N^1-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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