

# PRODUCT INFORMATION



## ER-mScarlet Probe mRNA (Cap-1; m1Ψ)

Item No. 43682

### Overview and Properties

**Synonym:** Endoplasmic Reticulum-mScarlet mRNA (Cap-1; N<sup>1</sup>-Methylpseudouridine)

**Storage:** -80°C (as supplied)

**Stability:** ≥6 months

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

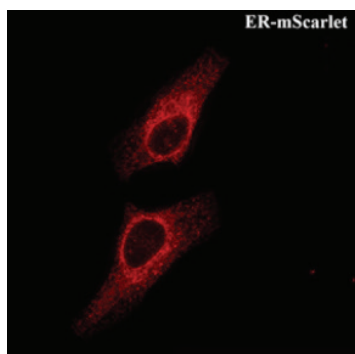
#### Protein

**Concentration:** 1 mg/ml

**Abs./Em. Max:** 569/594 nm

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

### Image



ER-mScarlet Probe mRNA (Cap-1; m1Ψ) was transfected in cells by Lipo2000. The endoplasmic reticulum in living cells was detected using super-resolution microscopy post-transfection.

**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**  
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## Description

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ER-mScarlet probe mRNA (Cap-1; m1 $\Psi$ ) encodes a fusion protein composed of an endoplasmic reticulum (ER) targeting sequence and mScarlet, a red fluorescent protein that displays absorbance and emission maxima of 569 and 594 nm, respectively.<sup>1</sup> It is capped using a co-transcriptional capping method, resulting in the naturally occurring Cap-1 structure with high capping efficiency. ER-mScarlet probe mRNA is also polyadenylated and modified with N<sup>1</sup>-methylpseudouridine (m1 $\Psi$ ) to reduce the host cell immune response and enhance mRNA stability. It can be used in the study of ER structure and function in live cells. Encapsulation of ER-mScarlet probe mRNA (Cap-1; m1 $\Psi$ ) in lipid nanoparticles (LNPs) can be used for mRNA delivery and expression of ER-mScarlet.

## Reference

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1. Bindels, D.S., Haarbosch, L., van Weeren, L., *et al.* mScarlet: A bright monomeric red fluorescent protein for cellular imaging. *Nat. Methods* **14**(1), 53-56 (2017).

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