

# PRODUCT INFORMATION



## tdTomato mRNA (Cap-1; m1Ψ)

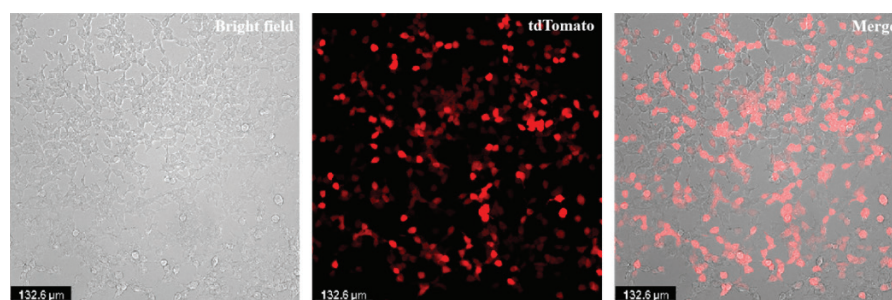
Item No. 43681

### Overview and Properties

|                       |  |
|-----------------------|--|
| <b>Synonym:</b>       | tdTomato mRNA (Cap-1; N <sup>1</sup> -Methylpseudouridine) |
| <b>Storage:</b>       | -80°C  |
| <b>Stability:</b>     | ≥6 months  |
| <b>Supplied in:</b>   | 1 mM sodium citrate, pH 6.4                                |
| <b>Concentration:</b> | 1.1 mg/ml  |
| <b>Ex./Em. Max:</b>   | 554/581 nm   |

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

### Image



tdTomato mRNA in 293T cells 24 hours post-transfection.

### Description

tdTomato mRNA (Cap-1; m1Ψ) encodes for tdTomato, a red fluorescent protein and derivative of *Discosoma* red fluorescent protein (DsRed) that displays excitation and emission maxima of 554 and 581 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. tdTomato 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 tdTomato mRNA (Cap-1; m1Ψ) in lipid nanoparticles (LNPs) can be used for mRNA delivery and expression of tdTomato.

### Reference

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).

**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.

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