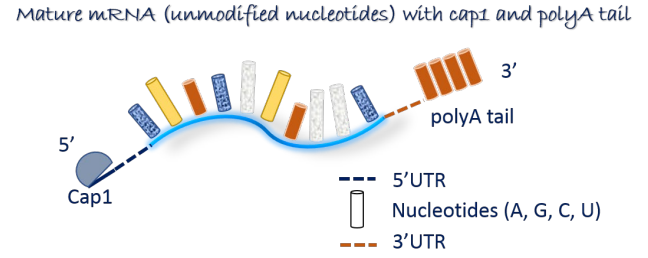
mCherry mRNA
(mRNA encoding mCherry fluorescent protein)

Description

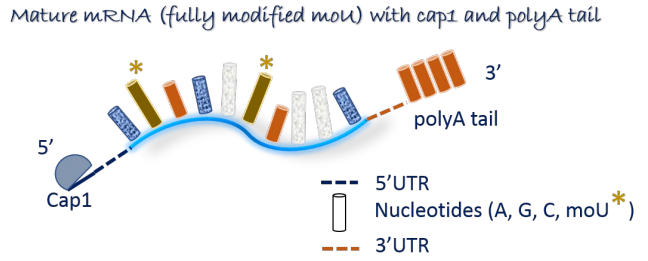
Ready-to-use stabilized mCherry mRNA
Concentration: 1.0 mg/mL in 1 mM Sodium Citrate, pH 6.4.
mRNA length: 934 nt. MW **MRNA1**=305314 g/mol; MW: **MRNA8**= 303709 g/mol; **MRNA13**= 306919 g/mol.

mCherry mRNAs have been designed to produce high expression level of mCherry fluorescent protein. OZB mRNAs are produced by *in vitro* transcription. mRNAs are stabilized at the 5' end by modified nucleotides capping (Cap1) and contain a poly(A) tail at the 3' end. Sequences have been optimized to yield improved stability and performance. mCherry mRNA #**MRNA8** does not bear any additional nucleotide modifications while #**MRNA13** is modified with 5-methoxyuridine (5moU), **MRNA1** is modified with N1-methyl-pseudouridine (N1-mψ) to reduce innate immune responses.

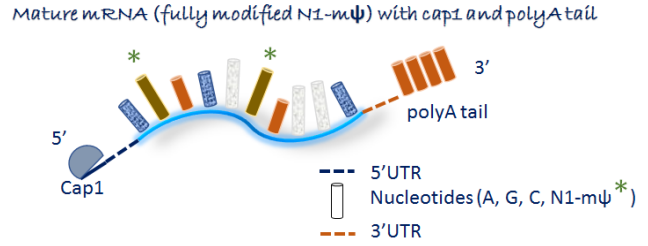
(ref# **MRNA8**):



(ref# **MRNA13**):



(ref# **MRNA1**):



Applications

mCherry mRNAs can be used as control of transfection efficiency. mCherry mRNAs resemble fully matured mRNAs with 5'cap1 structure and 3' polyA tail, therefore ready to be translated by the ribosome. mRNA transfection provides several advantages over plasmid DNA (pDNA) delivery. It does not require nuclear uptake for being expressed since translation of mRNA occurs directly into cytoplasm. Indeed, nuclear delivery (transport through nuclear membrane) is one the principal barriers for transfecting slow or non-dividing cells and consequently, mRNA transfection is particularly attractive for such purpose. This approach presents also the advantage of being non-integrative which is particularly appealing for stem cells, regenerative medicine or vaccine fields. Contrary to pDNA, mRNA cannot lead to genetic insertion causing mutations. Moreover, the protein expression from the mRNA is promoter-independent and faster than with DNA. For transfection we recommend RmesFect™ (#RM21000) and RmesFect™ Stem (#RS31000).

mCherry detection

For transfections performed with the mCherry mRNAs, the detection can be done by fluorescent microscopy. mCherry has an excitation peak at 587 nm and emission peak at 610 nm. mCherry expression level can also be monitored by Fluorescence-Activated Cell Sorter analysis (FACS).

Kit contents

mCherry mRNAs-20: 20 µg of mRNA unmodified or modified.
mCherry mRNAs-100: 100 µg of mRNA unmodified or modified.
mCherry mRNAs-1000: 1 mg of mRNA unmodified or modified.

Storage

mCherry mRNAs must be stored at -80°C
We recommend to aliquot the mRNA solution for a better storage.

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Rev 01/23 EB

Related Products

Ref	Description
RM21000	RmesFect™ transfection reagent 1mL
RS31000	RmesFect™ Stem transfection reagent 1mL

Discover the complete list of mRNA at: www.ozbiosciences.com
Custom mRNAs are also available now!

Contact Us

Feel free to contact us for all complementary information and remember to visit our website to stay informed on the latest breakthrough technologies and updated on our complete product list. (www.ozbiosciences.com). For bulk, please contact us: order@ozbiosciences.com

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