

## N<sup>1</sup>-Methylpseudo-UTP

Catalog Number	Packaging Size
LP009-1	10 µL
LP009-2	50 µL
LP009-3	100 µL

Storage upon receipt: -20°C

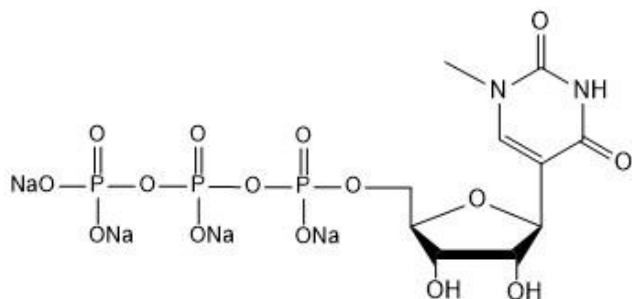
**N<sup>1</sup>-Methylpseudo-UTP (N<sup>1</sup>-Methyl-Pseudouridine-5'-Triphosphate)** is a modified NTP for incorporation into messenger RNAs (mRNA) using T7 RNA Polymerase. Incorporation of N<sup>1</sup>-methylpseudouridine can reduce the immunogenicity of the resulting mRNA.

It was reported that N<sup>1</sup>-methylpseudouridine (m1Ψ) modification alone or in combination with 5-methylcytidine (m5C) exhibited superiority over the current state-of-the-art pseudouridine (Ψ) or m5C/Ψ-modified mRNA platform by providing up to ~44-fold (when comparing double modified mRNAs) and ~13-fold (when comparing single modified mRNAs) higher reporter gene expression in cells and mice, respectively. Moreover, compared with m5C/Ψ-modified mRNAs, m5C/m1Ψ-modified mRNAs showed reduced intracellular innate immunogenicity and resulted in improved cellular viability after *in vitro* transfection. Thus, N<sup>1</sup>-methylpseudo-UTP might serve as a useful ingredient for synthesizing drugable mRNAs with better performance.

### Reference:

1. Andries O, Mc Cafferty S, De Smedt SC, et al. N<sup>1</sup>-methylpseudouridine-incorporated mRNA outperforms pseudouridine-incorporated mRNA by providing enhanced protein expression and reduced immunogenicity in mammalian cell lines and mice. *Journal of Controlled Release*, 2015, 217: 337-344.

**For research use only.**





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## Technical Information

<b>Formal Name:</b>	N <sup>1</sup> -Methyl-Pseudouridine-5'-Triphosphate
<b>CAS Number:</b>	1428903-59-6 (free acid)
<b>Molecular Formula:</b>	C <sub>10</sub> H <sub>17</sub> N <sub>2</sub> O <sub>15</sub> P <sub>3</sub> (free acid)
<b>Molecular Weight:</b>	497.98 (free acid)
<b>Purity:</b>	>95%
<b>Extinction Coefficient:</b>	8,880 Lmol <sup>-1</sup> cm <sup>-1</sup> at 271 nm
<b>Salt Form:</b>	Na <sup>+</sup>
<b>Concentration:</b>	100 mM in H <sub>2</sub> O
<b>Storage Condition:</b>	-20°C
<b>Shipping Condition:</b>	Ice packs