
Product Data Sheet

Product Name: N1-Me-pUTP,100mM Sodium Solution

Cat. No.: GB20016

Chemical Properties

Cas. No. 1428903-59-6

Formula $C_{10}H_{14}N_2Na_3O_{15}P_3$

M.Wt 564.11

Solubility A solution of water

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

N1-Me-pUTP,100mM Sodium Solution is a methyl modified form of naturally occurring pseudouridine (pUTP), which is commonly used in RNA therapy and RNA vaccine synthesis^[1, 2]. N1-Me-pUTP can be used in conjunction with lipid nanoparticle (LNP) encapsulation to optimize the stability and efficacy of COVID-19 vaccines^[3]. N1-Me-pUTP-modified mRNA can lead to reduced immune response and increased protein expression in vivo^[4, 5].

References:

[1] Parr C J C, Wada S, Kotake K, et al. N 1-Methylpseudouridine substitution enhances the performance of synthetic mRNA switches in cells[J]. Nucleic Acids Research, 2020, 48(6): e35-e35.

[2] Andries O, Mc Cafferty S, De Smedt S C, et al. N1-methylpseudouridine-incorporated mRNA outperforms pseudouridine-incorporated mRNA by providing enhanced protein expression and reduced immunogenicity in mammalian cell lines and mice[J]. Journal of Controlled Release, 2015, 217: 337-344.

[3] Luo Z, Lin Y, Meng Y, et al. Spleen-targeted mRNA vaccine doped with manganese adjuvant for robust anticancer immunity in vivo[J]. ACS nano, 2024, 18(44): 30701-

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

30715.

[4] Chen T H, Potapov V, Dai N, et al. N 1-methyl-pseudouridine is incorporated with higher fidelity than pseudouridine in synthetic RNAs[J]. Scientific Reports, 2022, 12(1): 13017.

[5] Mokuda S, Watanabe H, Kohno H, et al. N1-methylpseudouridine-incorporated mRNA enhances exogenous protein expression and suppresses immunogenicity in primary human fibroblast-like synoviocytes[J]. Cytotechnology, 2022, 74(4): 503-514.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA