

PRODUCT INFORMATION



DMT7

Item No. 41389

CAS Registry No.: 3080542-12-4
Formal Name: 1-(2-(dimethylamino)ethyl)-3-((6Z,9Z,28Z,31Z)-heptatriaconta-6,9,28,31-tetraen-19-yl)thiourea

MF: C₄₂H₇₉N₃S

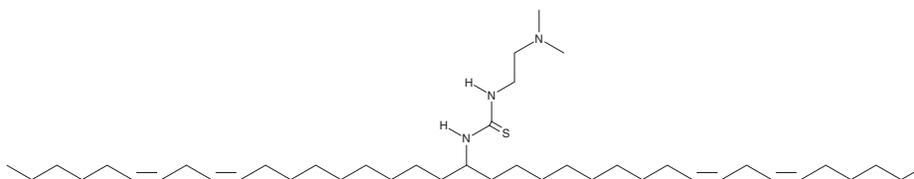
FW: 658.2

Purity: ≥90%

Supplied as: A 10 mg/ml solution in ethanol

Storage: -20°C

Stability: ≥1 year



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

Laboratory Procedures

DMT7 is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. DMT7 is sparingly soluble (1-10 mg/ml) in DMSO.

Description

DMT7 is an ionizable cationic lipid ($pK_a = 6.5$) that has been used in the generation of lipid nanoparticles (LNPs) for the delivery of mRNA and anticancer agents *in vivo*.¹ LNPs containing DMT7 and encapsulating mRNA encoding Il-12 and the STING agonist MSA-2 (Item No. 30140) decrease tumor volume, lung metastatic nodule numbers, and lung levels of CD4⁺ and CD8⁺ T cells in a 4T1 breast cancer mouse xenograft model of lung metastasis. The same LNPs decrease the number of tumor-associated regulatory T cells (Tregs), increase the number of tumor-associated M1 macrophages, and increase intratumoral levels of Il-12, Il-2, Tnf- α , and Ifn- γ in a B16/F10 murine melanoma model.

Reference

1. Wang, B., Tang, M., Chen, Q., *et al.* Delivery of mRNA encoding interleukin-12 and a stimulator of interferon genes agonist potentiates antitumor efficacy through reversing T cell exhaustion. *ACS Nano* **18**(24), 15499-15516 (2024).

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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