

PRODUCT INFORMATION



LipidLaunch™ MC3 LNP (Luciferase)

Item No. 40108

Overview and Properties

Synonym: LipidLaunch™ DLin-MC3-DMA LNP (Luciferase)

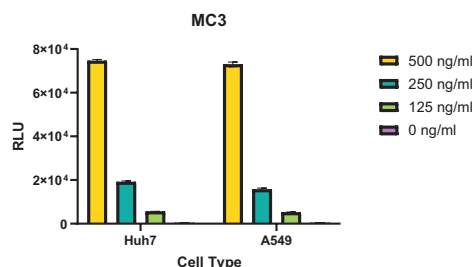
Storage: -80°C (as supplied)

Stability: ≥6 months

Supplied in: TBS, pH 7.5, with 10% sucrose

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

Images



Transfection of cells with luciferase-encapsulating MC3 particles. Huh7 hepatocytes (left), and A549 lung epithelial cells (right), were incubated with Cayman's LipidLaunch™ MC3 LNP (Luciferase) (Item No. 40108) at indicated RNA concentrations for 24 hours in culture cell media with 10% FBS. Luciferase expression (RLU) is shown.

LNP Characterization Parameters	
Size	75-150 nm
Polydispersity index (PDI)	<0.2
Encapsulation efficiency (%EE)	>85%
mRNA concentration	Batch specific, 25-100 µg/ml
mRNA/vial	5 µg

Description

LipidLaunch™ MC3 LNP (Luciferase) is a solution containing lipid nanoparticles (LNPs) composed of the ionizable cationic amino lipid DLin-MC3-DMA (MC3; Item No. 34364), cholesterol (Item Nos. 9003100 | 39088), the phospholipid 1,2-distearoyl-*sn*-glycero-3-PC (Item Nos. 15100 | 39189), and the lipid excipient DMG-PEG(2000) (Item No. 33945) at a molar ratio of 50:38.5:10:1.5 and encapsulating mRNA encoding firefly luciferase protein. It is intended for proof-of-concept experiments to determine whether MC3-based LNPs can effectively lead to the expression of a protein of interest in a target cell type, either *in vitro* or *in vivo*. Firefly luciferase is an enzyme that catalyzes the oxidation of ATP-dependent D-luciferin, resulting in chemiluminescence at a wavelength of approximately 560 nm.

Suggested *in vitro* use: Thaw LNPs on ice with occasional gentle swirling (*do not vortex*). Using a gentle pipetting technique, dilute 1:100-1:500 in complete cell culture media (with serum) and add to subconfluent cells in a luminescence-compatible tissue culture plate. Use a luciferase reporter assay substrate and read luminescence on a plate reader. Optimal conditions are highly dependent on cell type.

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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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM