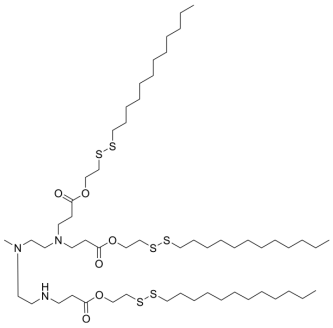
BAMEA-O16B

Cat. No.:	HY-139306
CAS No.:	2490668-30-7
Molecular Formula:	$C_{56}H_{111}N_3O_6S_6$
Molecular Weight:	1114.89
Target:	Liposome
Pathway:	Metabolic Enzyme/Protease
Storage:	Pure form -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 100 mg/mL (89.69 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.8969 mL	4.4847 mL	8.9695 mL
	5 mM	0.1794 mL	0.8969 mL	1.7939 mL
	10 mM	0.0897 mL	0.4485 mL	0.8969 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.24 mM); Clear solution
2. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (2.24 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BAMEAO16B is a lipid nanoparticle. BAMEAO16B integrated with disulfide bonds, can efficiently deliver Cas9 mRNA and sgRNA into cells while releasing RNA in response to the reductive intracellular environment for genome editing. BAMEAO16B can be used for the research of gene editing[1].

In Vitro

BAMEA-O16B/Cas9 mRNA/sgHPV18 (HeLa cells) treatment significantly prohibits HeLa growth compared to that of a scramble sgRNA and Cas9 mRNA delivery. BAMEA-O16B shows RNA delivery efficiency. BAMEA-O16B shows mRNA encapsulation efficiency. BAMEA-O16B shows GFP knockout efficiency. BAMEA-O16B mediated Cas9mRNA delivery is able to

	regulate endogenous gene expression. BAMEA-O16B/RNA treated cells shows a higher endosome escape efficiency than that of BAMEA-O16/RNA treatment. BAMEA-O16B/RFP mRNA (HeLa cells) nanoparticles results in efficient RFP expression[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	BAMEA-O16B/Cas9 mRNA/sgRNA (I.v.) nanoparticle effectively knocks mouse serum proprotein convertase subtilisin/kexin type 9 (PCSK9) level down to 20% of nontreated mouse. BAMEA-O16B/Cas9 mRNA/sgPCSK9 nanoparticle reduces mouse serum PCSK9 down to 20% of that with DPBS injection or BAMEA-O16B/Cas9 mRNA/scramblesgRNA nanoparticle injections [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu J, et al. Fast and Efficient CRISPR/Cas9 Genome Editing In Vivo Enabled by Bioreducible Lipid and Messenger RNA Nanoparticles. Adv Mater. 2019;31(33):e1902575.

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