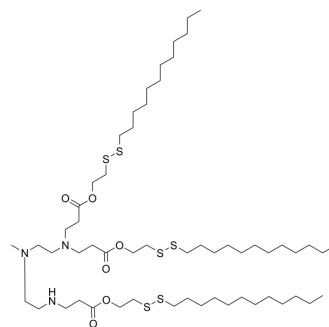


BAMEA-O16B

Cat. No.:	HY-139306	
CAS No.:	2490668-30-7	
Molecular Formula:	C ₅₆ H ₁₁₁ N ₃ O ₆ S 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)																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>0.8969 mL</td> <td>4.4847 mL</td> <td>8.9695 mL</td> </tr> <tr> <td>5 mM</td> <td>0.1794 mL</td> <td>0.8969 mL</td> <td>1.7939 mL</td> </tr> <tr> <td>10 mM</td> <td>0.0897 mL</td> <td>0.4485 mL</td> <td>0.8969 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	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
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Please refer to the solubility information to select the appropriate solvent.																						
In Vivo	<ol style="list-style-type: none"> 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 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 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.

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

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