

Recombinant human bone morphogenic protein 7 In Vitro Transcribed mRNA-LNP

Catalog Number:SG-MRNA-LNP-1895

DESCRIPTION	
Product Name	Recombinant human bone morphogenic protein 7 In Vitro Transcribed mRNA-LNP
Gene Name	BMP-7
Source	The ORF of Recombinant human bone morphogenic protein 7 was cloned in our IVT vector and mRNA was prepared through in vitro transcription and purification. The purified mRNA was further encapsulated with LNP(DSPC:Cholesterol:DMG-PEG:SM102).
Alternative names	Recombinant human bone morphogenic protein 7
SPECIFICATIONS	
Cap	m7GpppN
5'-UTR	5' -untranslated region derived from human alpha-globin RNA with an optimized Kozak sequence
ORF	Recombinant human bone morphogenic protein 7
3'-UTR	3' UTR comprising two sequence elements derived from the aminoterminal enhancer of split (AES) mRNA and the mitochondrial encoded 12S ribosomal RNA
Poly(A) Tail	A 110-nucleotide poly(A)-tail consisting of a stretch of 30 adenosine residues, followed by a 10-nucleotide linker sequence and another 70 adenosine residues.
Modifications	N1-methyl-pseudouridine
Neutral Lipid	1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC)
Cholesterol	Cholesterol
Ionizable Lipid	1,2-dimyristoyl-rac-glycero-3-methoxypolyethylene glycol-2000 (PEG2000-DMG)
PEG-lipid	Heptadecan-9-yl 8-((2-hydroxyethyl)(8-(nonyloxy)-8-oxooctyl)amino)octanoate)(SM-102)
Storage	-20 °C
Buffer	PBS, pH7.4
Cryoprotectant	Trehalose
BACKGROUND	
Gene Accession	

	Osteogenic protein 1 RH-polypeptide-52
Background	<p>BMP-7 (Bone morphogenetic protein 7) forms a dimeric protein with two homologous cysteine loops. It interacts with BMP-2 and BMP-4, but not with the BMP-2 receptors, Activin RIA, Activin RII, and BMPRII. The type 1 receptors Activin RIA, BMPRI-IA, and BMPRI-IB. BMP-7 promotes new bone formation and nephron development, inhibits the branching of prostate epithelium, and antagonizes epithelial-mesenchymal transition (EMT). In pathological conditions, BMP-7 inhibits tumor growth and metastasis, ameliorates fibrotic damage in nephritis, and promotes neuroregeneration following brain ischemia.</p>