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Interferon-β1a In Vitro Transcribed mRNA-LNP

Catalog Number:SG-MRNA-LNP-1887

DESCRIPTION	
Product Name	Interferon-β1a In Vitro Transcribed mRNA-LNP
Gene Name	IFN-b1a
Source	The ORF of Interferon-β1a 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	Interferon-β1a
SPECIFICATIONS	
Cap	m7GpppN
5'-UTR	5' -untranslated region derived from human alpha-globin RNA with an optimized Kozak sequence
ORF	Interferon-β1a
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
Lonizable 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	
Gene Alias	Interferon-β1a

	18–38% reduction in the rate of MS relapses. Interferon beta has not been shown to slow the advance of disability. Interferons are not a cure for MS (there is no known cure); the claim is that interferons may slow the progress of the disease if started early and continued for the duration of the disease.
Background	Interferon beta-1a (also interferon beta 1-alpha) is a cytokine in the interferon family used to treat multiple sclerosis (MS). It is produced by mammalian cells, while interferon beta-1b is produced in modified E. coli. Some research indicates that interferon injections may result in an