

## Interferon- $\alpha$ 2b In Vitro Transcribed mRNA-LNP

Catalog Number:SG-MRNA-LNP-1885

DESCRIPTION	
Product Name	Interferon- $\alpha$ 2b In Vitro Transcribed mRNA-LNP
Gene Name	IFN- $\alpha$ 2b
Source	The ORF of Interferon- $\alpha$ 2b 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- $\alpha$ 2b
SPECIFICATIONS	
Cap	m7GpppN
5'-UTR	5' -untranslated region derived from human alpha-globin RNA with an optimized Kozak sequence
ORF	Interferon- $\alpha$ 2b
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	
Gene Alias	Interferon- $\alpha$ 2b

Jak (Janus kinase) tyrosine kinases (Jak1 and Tyk2). These transphosphorylate themselves and phosphorylate the receptors. The phosphorylated INFAR receptors then bind to Stat1 and Stat2 (signal transducers and activators of transcription) which dimerize and activate multiple (~100) immunomodulatory and antiviral proteins. Interferon alpha binds less stably to type I interferon receptors than interferon beta.

#### Background

Interferon alpha 2b (human leukocyte clone hif-sn 206 protein moiety reduced). A type I interferon consisting of 165 amino acid residues with arginine in position 23. Interferon alpha binds to type I interferon receptors (IFNAR1 and IFNAR2c) which upon dimerization activate two