

Octreotide In Vitro Transcribed mRNA-LNP

Catalog Number:SG-MRNA-LNP-1893

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

carcinoid tumors and vasoactive intestinal tumors (VIPomas). Octreotide binds to somatostatin receptors coupled to phospholipase C through G proteins and leads to smooth muscle contraction in the blood vessels. Downstream effects that stimulate phospholipase C, the production of 1, 4,5-inositol triphosphate, and action on the L-type calcium channels lead to the inhibition of growth hormone, treating the various growth-hormone and metabolic effects of acromegaly. Octreotide's suppression of luteinizing hormone (LH), reduction in splanchnic blood flow, and inhibition of serotonin, gastrin, vasoactive intestinal peptide, secretin, motilin, and pancreatic polypeptide provide relief for the gastrointestinal and flushing symptoms of carcinoid and/or VIPoma tumors.

Background

Octreotide is a long-acting drug with pharmacologic activities that mimic those of the natural hormone, somatostatin, which inhibits the secretion of growth hormone. Additionally, it is used for the treatment of acromegaly and symptoms arising from various tumors, including