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SUMO In Vitro Transcribed mRNA-LNP

Catalog Number:MRNA-TG-006

DESCRIPTION	
Product Name	SUMO In Vitro Transcribed mRNA-LNP
Gene Name	SUMO
Source	In vitro transcribed mRNA encapsulated with LNP
Alternative names	
SPECIFICATIONS	
Cap	Cap 1
5'-UTR	5' -untranslated region derived from human alpha-globin RNA with an optimized Kozak sequence
ORF	SUMO
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	

	appropriate molecular chaperones for proper protein folding. In order to purify such proteins it may be necessary to fuse the protein of interest with a solubility tag such as SUMO or MBP (maltose-binding protein) to increase the protein's solubility. SUMO can later be cleaved from the protein of interest using a SUMO-specific protease such as Ulp1 peptidase.
Background	SUMO is short for Small Ubiquitin-like Modifier, the 100 amino acid sequence, which is necessary for regulation of protein transport and is important for controlling transcription for eukaryotic cells. Recombinant proteins expressed in E. coli may fail to fold properly, instead forming aggregates and precipitating as inclusion bodies. This insolubility may be due to the presence of codons read inefficiently by E. coli, differences in eukaryotic and prokaryotic ribosomes, or lack of