Tinzyme Co., Limited

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hEPO mRNA (N1-Me-Pseudo UTP)

Product Number: MR016

Shipping and Storage

Store at -20℃ with RNase Free Water as the storage buffer.

Components

Component	MR016	MR016
hEPO mRNA (N1-Me-Pseudo UTP) (1mg/ml)	100μg	1mg

Description

Recombinant human erythropoietin (EPO) is a glycoprotein hormone with a molecular weight of 34 kDa, composed of 165 amino acids, and is the main regulatory factor for mammalian regulation of red blood cell generation. Research has shown that transfection of EPO mRNA in vivo leads to a significant increase in reticulocyte and hematocrit measurements. This product effectively reduces the immunogenicity of mRNA expression in mammalian cells and enhances the stability of mRNA by introducing N1-methyl pseudouridine to replace the original UTP. It also simulates mature mRNA with a 5 'Cap 1 structure and a 3' poly (A) tail, making it an ideal choice for studying transfection and expression using various assays.

This product is a mature mRNA with a 5'Cap 1 structure and a 3'poly (A) tail, synthesized using the T7 High Yield RNA Transcription Kit (E131) and modified with Cap 1 Capping System Kit (M082). The sequence length is 1048nt.

Features

1. The Cap 1 structure is more suitable for mammalian systems and has higher translation efficiency than the Cap 0 structure (ARCA and m7Cap). Replacing UTP with modified base N1-Me Pseudo UTP can reduce the intrinsic immune stimulation of IVT mRNA and enhance protein translation. The addition of Poly (A) tail inhibits RNA mediated innate immune activation, increasing the stability and lifespan of mRNA in vivo and in vitro. Poly (A) also plays an important role in improving the efficiency of translation initiation.
2. The experimental method is simple and fast, with stable results and good reproducibility.
3. The mRNA transfection efficiency is stable.

Application

1. Gene substitution is a popular application of mRNA. The intracellular expression of mRNA greatly expands the number of possible indications for protein replacement therapy.
2. Human erythropoietin (hEPO) protein is a secreted protein that can be easily measured in serum through enzyme-linked immunosorbent assay. HEPO can stimulate the generation of red blood cells, which can be measured using hematocrit assay. HEPO mRNA can be used to mimic secreted proteins.

Quality control

There is no residual RNA enzyme, and mRNA purity, capping rate, and endotoxin testing are qualified.

Related products

Product number	Product name
GMP-M062	Vaccinia Capping Enzyme, GMP Grade
GMP-T701	T7 RNA Polymerase, GMP Grade
GMP-M072	mRNA Cap 2' O Methyltransferase, GMP Grade
GMP-RI01	RNase Inhibitor, GMP Grade

GMP-M012	Poly(A) Polymerase, GMP Grade
GMP-M036	Pyrophosphatase, Inorganic (yeast), GMP Grade
TM01	T7 RNA Transcription Enzyme Mix
M050801	eGFP mRNA
M050802	Luciferase mRNA
M050803	eGFP mRNA（N1-Me-Pseudo UTP）
M050804	Firefly Luciferase mRNA (N1-Me-Pseudo UTP)
MR201	eGFP circRNA
MR016	hEPO mRNA (N1-Me-Pseudo UTP)