

TNF-alpha-TF mRNA-LNP

Ready-to-use lipid nanoparticles

Order Information

Catalog#	Size	GenPept No.
PM-LNP-0072	200uL	

Description

Tumor necrosis factor (TNF or TNF α) is a multifunctional pro-inflammatory cytokine encoded by the TNF gene, which belongs to the TNF superfamily and consists of a variety of transmembrane proteins with homologous TNF domains. This cytokine is mainly secreted by macrophages. It triggers signaling through two receptors: TNFR1 and TNFR2. TNFR1 signaling tends to be pro-inflammatory and apoptotic, whereas TNFR2 signaling is anti-inflammatory and promotes cell proliferation. TNF α has been linked to a variety of diseases, including autoimmune diseases, insulin resistance, psoriasis, rheumatoid arthritis, ankylosing spondylitis, tuberculosis, autosomal dominant polycystic kidney disease, and cancer. This product is designed as a tool for the delivery and expression of TF-tagged human

Composition

mRNA-LNPs suspended in PBS (-Ca, -Mg) (pH: 7.0-7.4).

Translated Protein sequence

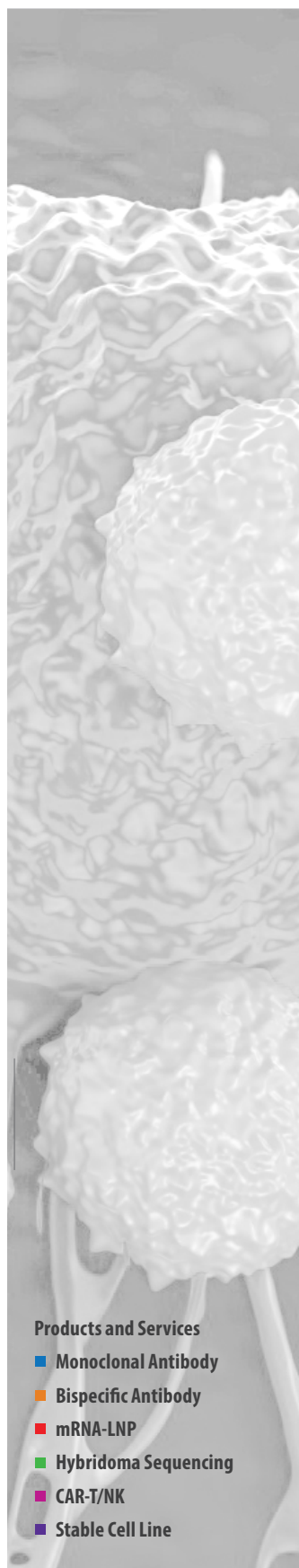
Available up request

Products and Services

- Monoclonal Antibody
- Bispecific Antibody
- mRNA-LNP
- Hybridoma Sequencing
- CAR-T/NK
- Stable Cell Line

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Storage

Product is delivered on blue ice. Store at 4°C for up to 3 months.

Application & Handling

Upon receiving product, briefly pulse spin before opening to ensure product is at bottom of container. It is important not to spin for too long as this may rupture mRNA-LNPs. Do not vortex. Work with mRNA-LNPs on ice and minimize the time that the product spends at room temperature. After handling the product during experiments, return immediately to ice. mRNA-LNP products should only be handled with certified RNase-free reagents and consumables. Use of filtered pipette tips is highly recommended.

Safety & Research Disclosure

All ProMab mRNA lipid nanoparticle products are for in vitro research use only. Products are not FDA approved for human use.

General Protocol

1. Prior to transfection: Plate 1ml of cells at a density of [1.0E6 cells/ml] in a single well of a 12-well culture plate. Ensure the cells you are using are viable and healthy. Try not to let your cells sit for longer than 5 minutes prior to transfection. Cell clumping at the time of transfection may reduce transfection efficiency. *Note: If cell clumping occurs, gently pipette your culture up & down to ensure you have a single cell suspension before transfecting.
2. Briefly pipette mRNA-LNP mix up & down to resuspend. Add 20-40ul of the mRNA-LNP product dropwise directly to your 1ml culture. Gently tilt plate back and forth to mix (not necessary if you are using cells which will be immediately placed back into a shaker). Place your transfected cells back into their original culture conditions.
3. Check cell expression by FACS or by using other detection methods at 24hr intervals after transfection. *Note: This is a generalized protocol for transfection using mammalian suspension culture cells. Transfection volume may be scaled up or down proportionately using the volumes given. HEK-293s cells were grown and transfected in FreeStyle™ F17 Expression Medium (Gibco, Cat#: A1383501), supplemented with GlutaMAX™ (Gibco, Cat#: 35050061), and Poloxamer 188 Non-ionic Surfactant (Gibco, Cat#: 24040032). T-cells were grown and transfected in a culture medium supplemented with 10% FBS (Omega Scientific, Cat#: FB-02). When transfecting cells using mRNA-LNPs, it is typically necessary for the cell culture medium to be supplemented with 10% FBS at the time of transfection. Without this supplement, transfection efficiency will drop significantly. For mRNA-LNP transfection of cells which cannot use FBS in the culture medium, please contact us at (510) 860-4615. Alternative transfection methods are available.

Expression of hTNF α -TF in S293 Cells Transfected with PM-LNP-0072

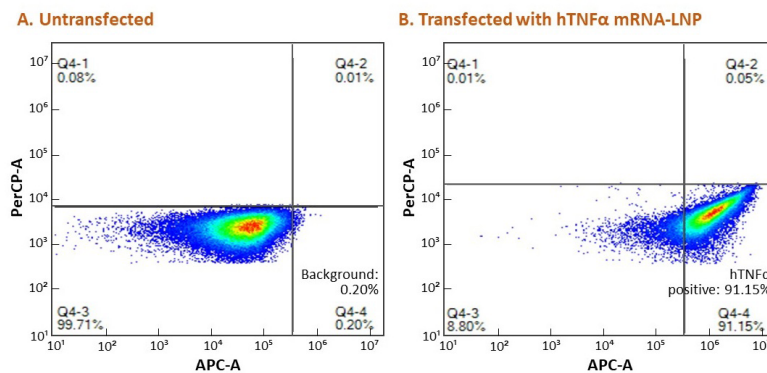


Figure 1. Flow Cytometry. Medium collected from PM-LNP-0072 nanoparticle-treated HEK293S cells contains TF-tagged TNF-alpha, detected by binding to anti-TF antibody-coated beads.

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