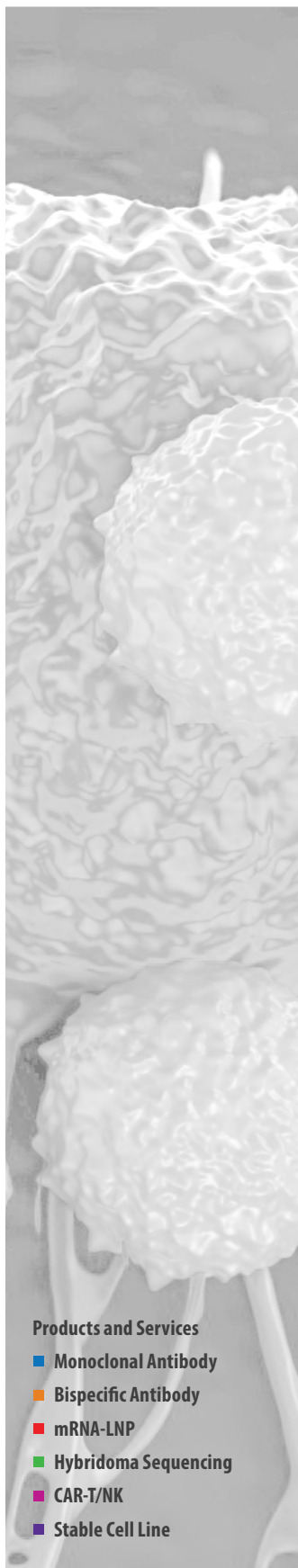


mouse GM-CSF mRNA-LNP

Ready-to-use lipid nanoparticles



Products and Services

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

Order Information

Catalog#	PM-LNP-0136	Size	200uL
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Description

GM-CSF (granulocyte-macrophage colony-stimulating factor) is a monomeric cytokine secreted by macrophages, T cells, mast cells, natural killer cells, endothelial cells and fibroblasts. Binding of GM-CSF to its receptor CSF2R on myeloid cells and some non-hematopoietic cells triggers multiple signaling pathways, including PI3K, JAK/STAT, and ERK1/2 signaling. The receptor consists of an α chain and a β chain, which bind GM-CSF with low and high affinity, respectively, and the β chain is shared with the IL-3 and IL-5 receptors. Due to its activity as a colony-stimulating factor, GM-CSF has been used clinically to restore the bone marrow cell population of leukemia patients after chemotherapy and/or radiotherapy. Targeting GM-CSF may represent a novel approach to control adverse immune responses in autoimmune diseases and chronic inflammation. Mouse GM-CSF is comprised of 141 amino acids and its GenPept accession number is P01587. ProMab's PM-LNP-0136 nanoparticles contain the mouse GM-CSF mRNA protected by a lipid shell. The nanoparticles are formulated with SM-102, DSPC, cholesterol and DMG-PEG2000 at an optimal molar concentration for a high rate of encapsulation and efficient mRNA delivery in vitro and in vivo.

Composition

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

Storage

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

Handling

Upon receipt, centrifuge the vial for a few seconds to ensure the contents are located at the bottom of the vial. Vortex mixing or prolonged centrifugation may rupture the nanoparticles. Store the vial of nanoparticles in the refrigerator and keep on ice when in use. Do not allow the nanoparticles to warm to room temperature. mRNA-LNP suspensions should only be handled with certified RNase-free reagents and consumables. The use of filtered pipette tips is highly recommended.

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Safety & Research Disclosure

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

Protocol for Transfecting Suspension Cells

Suspend 0.5 - 1 million cells in 1 ml of culture medium. Ensure the cells are healthy and well-dispersed, as cell clumping may reduce transfection efficiency. Disperse the nanoparticle suspension by gently pipetting up and down several times, then slowly add 20-40 μ l to the cells, dropwise. Gently mix the cells and incubate them overnight in a culture incubator. The next day, and every day thereafter, check the culture for expression of the protein encoded by the mRNA-LNP. Cell-bound proteins can be detected by flow cytometry or western blotting using the transfected cells, whereas secreted proteins can be detected by ELISA, western blotting or flow cytometry (on a target cell line) using the medium collected from the transfected cells.