

CXCL12 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-0141	Size	200uL
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Description

CXCL12, also known as SDF-1 (stromal cell-derived factor 1) is a chemokine responsible for the migration of cells bearing the chemokine receptor CXCR4. During embryonic development, CXCL12 directs hematopoietic cells to migrate from the liver to the bone marrow and neurons to migrate in the developing brain. In adults, CXCL12 recruits monocytes and lymphocytes to areas of inflammation, endothelial precursor cells to sites of angiogenesis, and mesenchymal stem cells to sites of bone destruction. In disease, CXCL12 has been implicated in multiple sclerosis, Alzheimer's disease, fibrosis and cancer. CXCL12 is comprised of 93 amino acids and its GenPept accession number is NP_000600. ProMab's PM-LNP-0132 nanoparticles contain an mRNA encoding CXCL12 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 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 ul 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.

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