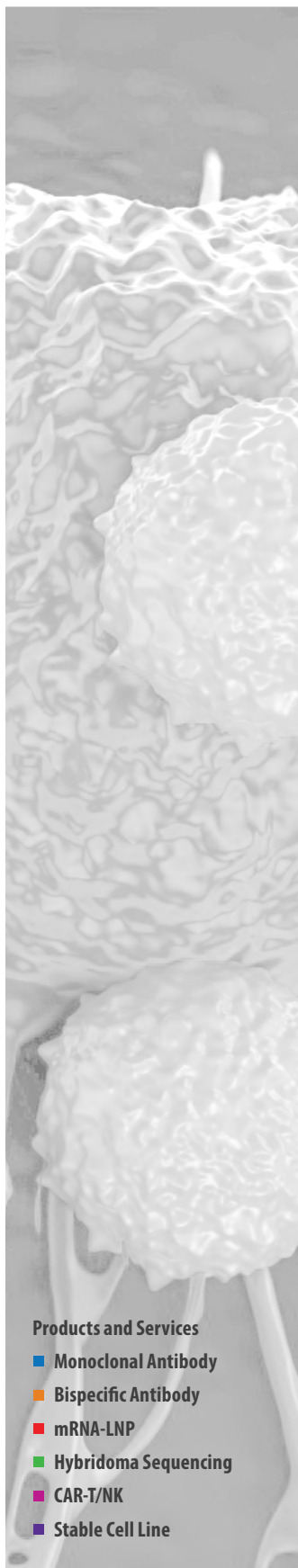


Hsp27-TF mRNA-LNP

Ready-to-use lipid nanoparticles



Order Information

Catalog# PM-LNP-0130 Size 200uL

Description

Hsp27 (27 kDa heat shock protein), encoded by the HSPB1 (heat shock protein family B member 1) gene, is a ubiquitous protein with multiple functions. As a chaperone, it binds to unfolded or misfolded proteins, preventing the proteins from aggregating. Hsp27 also prevents actin microfilaments from binding to each other or fragmenting, and preserves the microfilament contacts at the cell membrane. In addition, Hsp27 serves as a link between ubiquitinated proteins and the proteasome, speeding up protein degradation. Moreover, Hsp27 modulates the NF- κ B signaling pathway involved in cell proliferation, cell differentiation and inflammation. Hsp27 consists of 205 amino acids and its GenPept accession number is NP_001531. ProMab's PM-LNP-0130 nanoparticles contain an mRNA encoding Hsp27 and a C-terminal TF tag 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.

Hsp27-TF mRNA-LNP

Ready-to-use lipid nanoparticles

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.

Hsp27 Expression in HEK293S Cells Treated with PM-LNP-0130

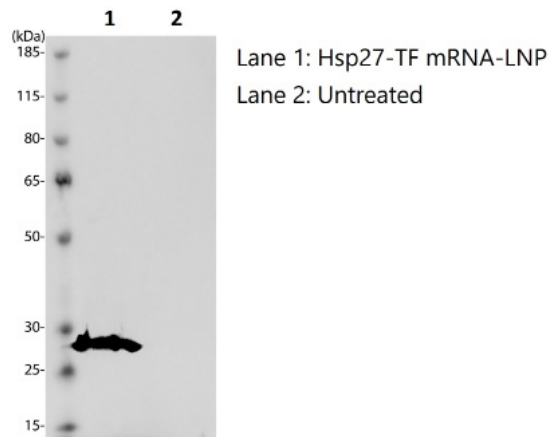


Figure 1. Western blot. Lysed PM-LNP-0130 nanoparticle-treated HEK293S cells contain TF-tagged Hsp27, detected with an anti-TF antibody.

Products and Services

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