Product Datasheet

BCMA mRNA-LNP (orb2719896)

Catalog Number	orb2719896
Category	Proteins
Description	BCMA (B cell maturation antigen), also known as CD269, TNFRSF-17, is an ideal target antigen for novel multiple myeloma therapy due to its highly selective expression in malignant plasma cells. BCMA is a cell surface receptor of the TNF receptor superfamily that recognizes B cell activators and is encoded by the human TNFRSF17 gene. This receptor is preferentially expressed on mature B lymphocytes and is important for B cell development and autoimmune responses. This receptor has been shown to specifically bind tumor necrosis factor (ligand) superfamily member 13b (TNFSF13B/TALL-1/BAFF), thereby activating NF-ÎºB and MAPK8/JNK. For targeting BCMA, chimeric antigen receptor (CAR)-modified T-cell therapy is one of the most common treatment modalities. Interleukin-15 (IL-15), encoded by the IL15 gene, is a member of the four Î±-helix bundle family of cytokines. Like IL-2, IL-15 binds to and signals through a complex consisting of the IL-2/IL-15 receptor beta chain (CD122) and common gamma chains (Î³-C, CD132). IL-15 regulates the activation and proliferation of T cells and natural killer (NK) cells. As an inhibitor of the apoptotic pathway, IL-15 inhibits T lymphocyte apoptosis by inducing Bcl-2 and/or Bcl-xL. In preclinical models, IL-15 has been shown to enhance antitumor immunity of CD8+ T cells. This product is designed as a tool for the delivery and expression of human BCMA mRNA for research. The product leverages the lipid nanoparticle (LNP) technology platform for simple and efficient delivery of BCMA mRNA to a variety of mammalian cells in vitro and in vivo. The LNPs used 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. Human BCMA protein is approximately 20 kD and the GenPept accession number is NP_001183.
Form/Appearance	mRNA-LNPs suspended in PBS (-Ca, -Mg) (pH: 7.0-7.4).

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Application notes	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.
Storage	4°C; ice
Note	For research use only

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