Product Datasheet

Anti-EGFR CAR mRNA-LNP (orb2719930)

Catalog Number	orb2719930
Category	Proteins
Description	EGFR (epidermal growth factor receptor) is a transmembrane protein and receptor for members of the epidermal growth factor (EGF) family of extracellular protein ligands. It is a member of the ErbB receptor family, a subfamily of four closely related receptor tyrosine kinases: EGFR (ErbB-1), HER2/neu (ErbB-2), Her 3 (ErbB-3) and Her 4 (ErbB-4). Defective signaling of EGFR and other receptor tyrosine kinases in humans has been linked to diseases such as Alzheimer's disease, while overexpression has been linked to the development of various tumors. Disruption of EGFR signaling by blocking the EGFR-binding site on the extracellular domain of the receptor or inhibiting intracellular tyrosine kinase activity prevents the growth of EGFR-expressing tumors and improves patient outcomes. This product is designed as a tool for the delivery and expression of anti-EGFR CAR mRNA for research. The product leverages the lipid nanoparticle (LNP) technology platform for simple and efficient delivery of anti-EGFR CAR 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. The anti-EGFR CAR in this product is approximately 56 kD and consists of anti-EGFR scFv (single-chain variable fragment) linked to a second-generation CAR (chimeric antigen receptor) containing the CD8 hinge and transmembrane domain and 4-1BB and CD3Î¶ signaling domains. The full-length amino acid sequence of this anti-EGFR CAR mRNA-LNP product is available upon request.
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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