Product Datasheet

Human Anti-CS1 CAR mRNA-LNP (orb2719923)

Catalog Number	orb2719923
Category	Antibodies
Description	CS1 (CD2 subset-1), also known as CD319 (SLAMF7), is a human natural killer (NK) cell receptor encoded by the SLAMF7 gene. This surface antigen is a robust marker of normal and malignant plasma cells in multiple myeloma. Human NK cells express two splice variants of CS1: CS1-S lacks an intracellular domain for activation, while CS1-L contains an intracellular domain and is therefore capable of activating NK cytotoxicity. CS1 is a homophilic receptor, and CS1-CS1 interaction leads to the activation of natural cytotoxicity of NK cells. Both isoforms of CS1 are membrane bound and expressed in NK cells. However, only the CS1-L isoform is expressed in B cells and regulates B cell proliferation and autocrine. This product is designed as a tool for the delivery and expression of human anti-CS1 CAR mRNA for research. The product leverages the lipid nanoparticle (LNP) technology platform for simple and efficient delivery of human anti-CS1 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 human anti-CS1 CAR in this product is approximately 56 kD, consisting of human anti-CS1 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 human anti-CS1 CAR mRNA-LNP product is available upon request.
Species/Host	Human
Conjugation	Unconjugated
Form/Appearance	mRNA-LNPs suspended in PBS (-Ca, -Mg) (pH: 7.0-7.4).

Biorbyt Ltd.
7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: +44 (0)1223 859353 | Fax: +1 (415) 651-8558

Biorbyt LLC
68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713
United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: +1 (415) 906-5211 | Fax: +1 (415) 651-8558

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	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Note	For research use only

Biorbyt Ltd.
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Biorbyt LLC
68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713
United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: +1 (415) 906-5211 | Fax: +1 (415) 651-8558