

DC13058 | E8i-200

Instructions for Use

E8i-200 is a novel Branched Endosomal Disruptor (BEND) ionizable lipid, designed to enhance the efficiency of lipid nanoparticles (LNPs) in drug delivery, particularly for mRNA and protein delivery. Its unique structure, featuring terminal branching, improves endosomal escape, a critical step in the delivery of therapeutic cargo into cells. E8i-200 is designed to enhance endosomal escape, a key bottleneck in mRNA and protein delivery. Its terminal branching structure provides several advantages:

- Improved Endosomal Membrane Penetration:** The branched structure allows E8i-200 to more effectively disrupt endosomal membranes, facilitating the release of mRNA and proteins into the cytoplasm.
- Enhanced Gene Editing Efficiency:** E8i-200 has been shown to significantly improve the delivery of CRISPR-Cas9 ribonucleoprotein (RNP) complexes, enabling efficient gene editing in vivo. E8i-200 significantly enhanced mRNA expression in the liver, outperforming traditional linear lipids like C12-200 in mouse models. E8i-200 effectively delivered CRISPR-Cas9 RNP complexes, achieving high editing efficiency in the liver, surpassing that of linear lipids. E8i-200 also showed high transfection efficiency and low cytotoxicity in T cells, making it a promising candidate for CAR-T cell engineering and other immunotherapies.

Product information

CAS No.	Not available
Chemical Name	E8i-200
Formula	C75H155O5N5
M.Wt	1,207.10
Purity	Not available
Storage	Original product: up to 1 year under the storage conditions stated on the vial, kept tightly sealed. Stock solutions: aliquots at -20°C, generally up to one month.
Shipping condition	Ships from Shanghai. Pure lipid is stable during ice-pack transport.

Formulation & study context

Literature values apply to the cited study only. Administration routes describe research, not clinical instructions.

A complete product-specific formulation has not been verified. No standard ratio is substituted.

N/P ratio	Not reported in the verified record
Cargo	Not available in the verified record
Administration route	Not available in the verified record
Animal model	Not available in the verified record
Formulation process	Not available in the verified record

N/P is a nitrogen-to-phosphate molar ratio. Lipid:cargo mass ratio is a different quantity and must not be used as N/P.

Stock-solution preparation table

Calculated using product-page MW: 1207.1 g/mol. Volumes are final solution volumes.

Mass	1 mM	5 mM	10 mM
10 mg	8.284 mL	1.657 mL	0.828 mL
25 mg	20.711 mL	4.142 mL	2.071 mL
50 mg	41.422 mL	8.284 mL	4.142 mL
100 mg	82.843 mL	16.569 mL	8.284 mL
250 mg	207.108 mL	41.422 mL	20.711 mL

Volume (mL) = mass (mg) × 1000 / [MW (g/mol) × concentration (mM)]. Mathematical conversions only; not measured solubility. Confirm solvent compatibility and the exact material before preparation.

Handling & storage

Provided that storage conditions are as stated on the product vial and the vial is kept tightly sealed, the product can be stored for up to 1 year.

Wherever possible, prepare and use solutions on the same day. If stock solutions must be prepared in advance, store them as aliquots in tightly sealed vials at -20°C. Generally, these will be usable for up to one month.

Before use, and prior to opening the vial, allow the product to equilibrate to room temperature for at least 1 hour.

References

Not available