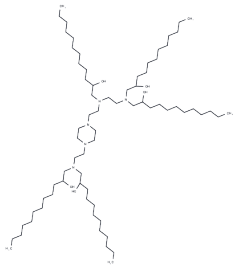
Data Sheet (Cat.No.T38604)

TargetMol

C12-200

Chemical Properties



CAS No. : 1220890-25-4

Formula: C70H145N5O5

Molecular Weight: 1136.93

Storage: Keep away from moisture,Store at low temperature
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	C12-200 is a five-tail/branched ionizable cationic lipid that serves as a benchmark lipid material in RNA delivery, demonstrating exceptional performance in mRNA and siRNA lipid nanoparticle (LNP) formulations.
Targets(IC50)	Others,Liposome
In vitro	**Methods**: After intraperitoneal injection of siRNA-Cy5.5 (C12-200) LNPs (1 mg/kg) in mice, peritoneal lavage fluid was collected at 6 and 24 hours to analyze Cy5.5 signal in F4/80 CD11b macrophages (LPMs). **Results**: At both 6h and 24h, the mean fluorescence intensity of Cy5.5 and the percentage of $Cy5.5^{+}$ cells in LPMs were significantly elevated. [1]
In vivo	**Methods**: Acute liver injury was induced in mice by intraperitoneal injection of APAP (300 mg/kg). Six hours later, siRNA-Cy5 (C12-200) LNPs (1 mg/kg siRNA) were administered via intraperitoneal injection. **Results**: It was demonstrated that GLPMs enter the bloodstream following liver injury and were successfully labeled by C12-200 LNP. [2]

Solubility Information

Solubility	DMSO: 90 mg/mL (79.16 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (2.9 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8796 mL	4.3978 mL	8.7956 mL
5 mM	0.1759 mL	0.8796 mL	1.7591 mL
10 mM	0.088 mL	0.4398 mL	0.8796 mL
50 mM	0.0176 mL	0.088 mL	0.1759 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Oza D, et al. Lipid nanoparticle encapsulated large peritoneal macrophages migrate to the lungs via the systemic circulation in a model of clodronate-mediated lung-resident macrophage depletion. Theranostics. 2024 Apr 8;14 (6):2526-2543.
Oza D, et al. Treatment of Acute Liver Injury through Selective Tropism of High Mobility Group Box 1 Gene-Silenced Large Peritoneal Macrophages. ACS Nano. 2025 Apr 1;19(12):12102-12118.