

Product Data Sheet

Product Name: Stearyl-(homoarginine)8 (trifluoroacetate salt)

Cat. No.: GC92104

Chemical Properties

Cas. No.

Chemical Name N-((7S,10S,13S,16S,19S,22S,25S,28S)-1,34-diamino-7-carbamoyl-10,13,16,19,22,25-hexakis(4-guanidinobutyl)-1,34-diimino-9,12,15,18,21,24,27-heptaoso-2,8,11,14,17,20,23,26,33-nonaazatetratriacontan-28-yl)stearamide, trifluoroacetate salt

SMILES CCCCCCCCCCCCCCCCCCCC(N[C@@H](CCCCNC(N)=N)C(N[C@H](C(N[C@@H](CCCCNC(N)=N)C(N[C@H](C(N[C@@H](CCCCNC(N)=N)C(N[C@H](C(N[C@@H](CCCCNC(N)=N)C(N[C@H](C(N[C@@H](CCCCNC(N)=N)C(N[C@H](C(N)=O)CCCCNC(N)=N)=O)=O)=O)=O)CCCCNC(N)=N)=O)=O)CCCCNC(N)=N)=O)=O.O=C(F)(F)F

Formula $C_{74}H_{149}N_{33}O_9$? XCF_3COOH M.Wt 1645.2

Solubility Water: Slightly soluble: 0.1-1 mg/ml Storage $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

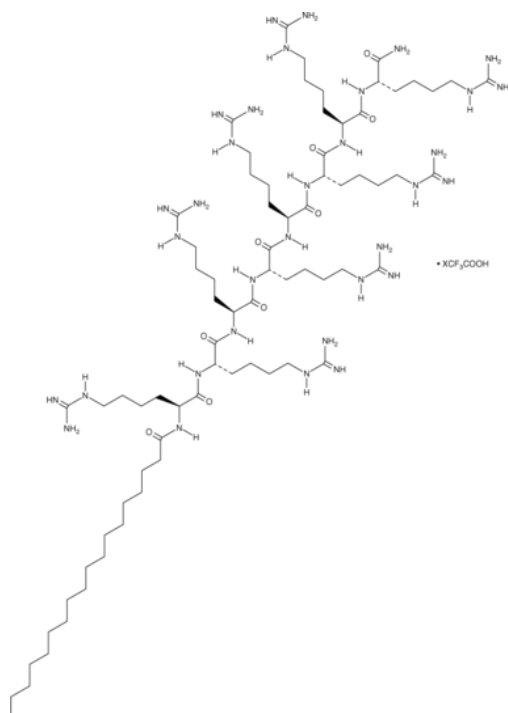
Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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Structure



Background

Stearyl-(homoarginine)8 is a cell-penetrating peptide conjugated to stearic acid that has been used in the generation of liposomes for plasmid DNA or siRNA delivery *in vitro*.^{1,2} Liposomes containing stearyl-(homoarginine)8 and in complex with plasmid DNA enter NIH3T3 cells *via* the endocytosis pathway.¹ Liposomes containing a high density, but not a low density, of stearyl-(homoarginine)8 and encapsulating plasmid DNA increase plasmid DNA expression without being degraded by lysosomes in NIH3T3 cells.² Stearyl-(homoarginine)8-containing liposomes encapsulating siRNA targeting the mRNA encoding GAPDH decrease GAPDH levels in primary human aortic smooth muscle cells.³

References:

- [1]. Khalil, I.A., Futaki, S., Niwa, M., et al. Mechanism of improved gene transfer by the N-terminal stearylation of octaarginine: Enhanced cellular association by hydrophobic core formation *Gene Ther.* 11(7)636-644(2004).
- [2]. Khalil, I.A., Kogure, K., Futaki, S., et al. High density of octaarginine stimulates macropinocytosis leading to efficient intracellular trafficking for gene expression *J. Biol. Chem.* 281(6)3544-3551(2006).
- [3]. Fisher, R.K., Mattern-Schain, S.I., Best, M.D., et al. Improving the efficacy of liposome-mediated vascular gene therapy via lipid surface modifications *J. Surg. Res.* 219136-144(2017).

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