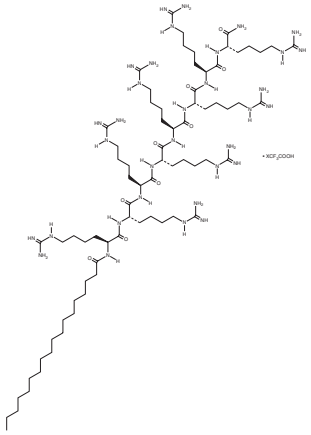
PRODUCT INFORMATION

Stearyl-(homoarginine)8 (trifluoroacetate salt)

Item No. 42367

Formal 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-heptaoxo-2,8,11,14,17,20,23,26,33-nonaazatetratriacontan-28-yl)stearamide, trifluoroacetate salt
Synonyms:	Stearyl-octaarginine, Stearyl-R8, Stearylated Octaarginine
MF:	$C_{74}H_{149}N_{33}O_9 \bullet XCF_3COOH$
FW:	1,645.2
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Stearyl-(homoarginine)8 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the stearyl-(homoarginine)8 (trifluoroacetate salt) in water. Stearyl-(homoarginine)8 (trifluoroacetate salt) is slightly soluble (0.1-1 mg/ml) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Stearyl-(homoarginine)8 is a cell-penetrating peptide conjugated to stearic acid (Item No. 10011298) 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.* **219**, 136-144 (2017).

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