

# 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-heptaazo-2,8,11,14,17,20,23,26,33-nonaazatetradriacontan-28-yl)stearamide, trifluoroacetate salt

**Synonyms:** Stearyl-octaarginine, Stearyl-R8, Stearilated Octaarginine

**MF:**  $C_{74}H_{149}N_{33}O_9 \bullet XCF_3COOH$

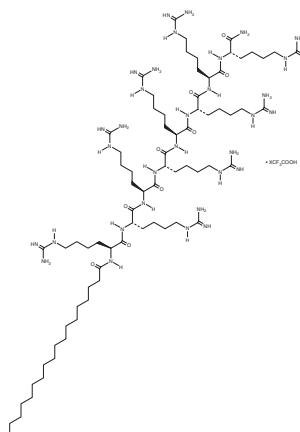
**FW:** 1,645.2

**Purity:**  $\geq 95\%$

**Supplied as:** A solid

**Storage:**  $-20^\circ C$

**Stability:**  $\geq 4$  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*.<sup>1,2</sup> Liposomes containing stearyl-(homoarginine)8 and in complex with plasmid DNA enter NIH3T3 cells *via* the endocytosis pathway.<sup>1</sup> 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.<sup>2</sup> Stearyl-(homoarginine)8-containing liposomes encapsulating siRNA targeting the mRNA encoding GAPDH decrease GAPDH levels in primary human aortic smooth muscle cells.<sup>3</sup>

### 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.L., 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/29/2024

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM