

Product Data Sheet

Product Name: DSPE-PEG2000-Mal-Cys-penetratin

Cat. No.: GC79700

Chemical Properties

Cas. No.

Formula

M.Wt

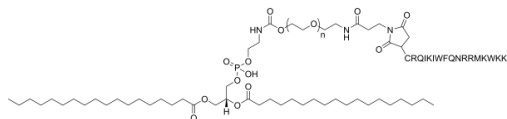
Solubility

Storage Store at -80°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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.

Structure



Background

DSPE-PEG2000-Mal-Cys-penetratin is a conjugate composed of DSPE, a PEG chain, and terminal maleimide (Mal). DSPE-PEG2000-Mal-Cys-penetratin combines the membrane compatibility of lipids,

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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the ability to undergo specific Michael addition reactions with thiol-containing (-SH) biomolecules (such as peptides, antibodies, and aptamers), and the ability to penetrate cell membranes, making it suitable for research on biomaterial construction and drug delivery to cells.

In Vitro, The structure of DSPE-PEG2000-Mal-Cys-penetratin comprises four key components, which work synergistically: DSPE: Acts as a hydrophobic anchor, responsible for securely embedding the entire molecule into the membrane structure of lipid nanoparticles. PEG chain: As a hydrophilic spacer, it forms a hydration layer on the particle surface, reducing non-specific adsorption and immune system recognition and clearance, thus prolonging the carrier's circulation time in vivo. Maleimide: Located at the end of the PEG chain, it acts as a reaction interface, undergoing specific Michael addition reactions with thiol-containing (-SH) biomolecules (such as peptides, antibodies, and aptamers) to achieve targeting or tracking functions. Cys-penetratin: Efficiently helps the entire nanoparticle cross the cell membrane and enter the cell to exert its effects.

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