

Product Data Sheet

Product Name: Gem-C12

Cat. No.: GC79866

Chemical Properties

Cas. No. 849139-19-1

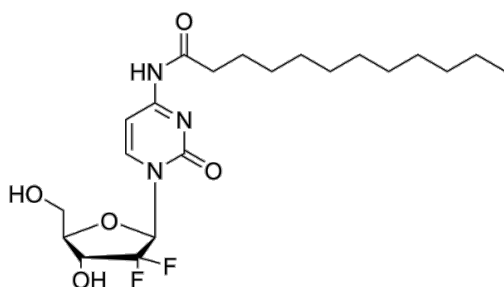
Formula $C_{21}H_{33}F_2N_3O_5$ M.Wt 445.5

Solubility DMSO: 35 mg/mL (78.56 mM; Need ultrasonic) Storage Store at -20°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

Gem-C12 is a prodrug of Gemcitabine. Gem-C12 terminates DNA chain elongation, inhibits nucleic acid synthesis and induces Apoptosis. Gem-C12 inhibits the proliferation of glioma cells. Gem-C12 and Honokiol exhibit synergistic anti-glioblastoma activity. Gem-C12 can be used in research related to glioblastoma multiforme [1].

In Vivo, Hyaluronic acid-grafted micelles encapsulating Gem-C12 and HNK (1:1 mole ratio) (25 µmol/kg; i.v.; every three days; six total doses) achieve an 84.8% tumor inhibitory rate and potent

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

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suppression of subcutaneous glioblastoma growth in male Balb/c nude mice^[1].

In Vitro, Gem-C12 (24 h) inhibits glioblastoma U87 cell viability with an IC₅₀ of 15.74 μ M after 24 h of incubation^[1]. Free Gem-C12 combined with HNK at a 1:1 mole ratio (24 h) inhibits human glioblastoma U87 cell viability with a Gem-C12 IC₅₀ of 8.75 μ M and a synergistic CI of 0.78 after 24 h of incubation^[1].

References:

[1]. Liu X, et al. Hyaluronic Acid-Modified Micelles Encapsulating Gem-C12 and HNK for Glioblastoma Multiforme Chemotherapy. Mol Pharm. 2018 Mar 5;15(3):1203-1214.

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