

Product Data Sheet

Product Name: Golgicide A

Cat. No.: GC16585

Chemical Properties

Cas. No. 1139889-93-2

Chemical Name (3aR,9bS)-6,8-difluoro-4-pyridin-3-yl-3a,4,5,9b-tetrahydro-3H-cyclopenta[c]quinoline

SMILES C1C=CC2C1C(NC3=C(C=C(C=C23)F)F)C4=CN=CC=C4

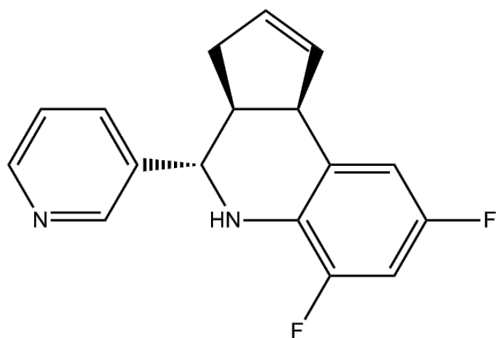
Formula $C_{17}H_{14}F_2N_2$ M.Wt 284.3

Solubility 1mg/mL in ethanol, 10mg/mL in DMSO, 30mg/mL in DMF 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



Protocol

Cell experiment [1]:

Cell lines Hep3B hepatocellular carcinoma cells, Huh7 cells, HepG2 cells, LO2 cells, and MPC5 cells

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

Product Data Sheet

Preparation Method Cells were maintained in high-glucose Dulbecco's modified Eagle's medium (DMEM) supplemented with 10% fetal bovine serum (FBS) at 37°C, 5% CO₂. Cells were treated with Golgicide A at 10μM for 60min, and treated with EGF(1μg/mL) for 3min.

Reaction Conditions 10μM; 1h pretreatment

Applications Golgicide A significantly significantly reduced the size of circular dorsal ruffles (CDRs) in Hep3B cells. Golgicide A attenuated cell proliferation and malignant potential (migration and invasion) in Hep3B cells.

Animal experiment [2]:

Animal models Female BALB/c nude mice (aged 5-6 weeks)

Preparation Method A549-derived lung cancer stem cells (LCSCs) (1×10⁷cells) were subcutaneously injected into the right dorsal midline. Mice were randomly assigned to three treatment groups (n=5) on day 7 post-inoculation: low-dose Golgicide A (20mg/kg/week), high-dose Golgicide A (50mg/kg/week), and a control group (solvent only). Treatments were administered for 4 weeks.

Dosage form 20 or 50mg/kg/week; subcutaneous injection; weekly administration for 4 weeks.

Applications Golgicide A significantly inhibited tumor growth in xenograft models, as demonstrated by reduced tumor volume and weight compared to the control group.

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

Product Data Sheet

References:

- [1] Sun X, Li Y, He Y, et al. Aberrant expression of GTPase-activating protein ARAP1 triggers circular dorsal ruffles associated with malignancy in hepatocellular carcinoma Hep3B cells. *Cell Commun Signal*. 2025 Feb 11;23(1):75.
- [2] Zhang F, Zhang SH, Liu T, et al. Golgicide A induces pyroptosis of lung cancer stem cells by regulating dTGN formation via GOLPH3/MYO18A complex. *Stem Cell Res Ther*. 2025 Mar 7;16(1):121.

Background

Golgicide A is a highly specific and reversible cis-Golgi ADP-ribosylation factor guanine nucleotide exchange factor (ArfGEF GBF1) inhibitor. By selectively targeting GBF1 and reducing the activation of Arf1, Golgicide A blocks intracellular vesicle transport and protein secretion^[1-2]. Golgicide A is utilized in research on infection mechanisms of pathogens such as hepatitis C virus and enteroviruses, as well as in studies on cancer development and progression^[3-4].

In vitro, Golgicide A, at a concentration of 400nM, was used to treat swine testicular (ST) cells infected with Classical Swine Fever Virus (CSFV). Golgicide A significantly inhibited the proliferation of CSFV, reduced the CSFV RNA load in the cells, and suppressed viral particle production^[5]. In Hep3B, HepG2, and MPC5 cells treated with 10μM Golgicide A for 60 minutes, followed by stimulation with EGF (1μg/mL) for 3 minutes, Golgicide A significantly reduced the size of growth factor-induced circular dorsal ruffles^[6].

In vivo, subcutaneous injection of Golgicide A (10mg/kg/day) in hSCARB2 transgenic mice infected with EV-A71 (starting from the onset of infection and administered continuously for 5 days) significantly reduced mouse mortality and alleviated brain tissue pathological damage caused by the viral infection^[7]. In A549-derived lung cancer stem cell tumor-bearing BALB/c nude mice, subcutaneous injection of Golgicide A (20mg/kg/week and 50mg/kg/week) (starting from day 7 post-inoculation, administered weekly for 4 weeks), Golgicide A significantly inhibited tumor growth and induced pyroptosis in lung cancer stem cells^[8].

References:

- [1] Sáenz JB, Sun WJ, Chang JW, et al. Golgicide A reveals essential roles for GBF1 in Golgi

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

Product Data Sheet

assembly and function. Nat Chem Biol. 2009 Mar;5(3):157-65.

[2] Farhat R, Ankavay M, Lebsir N, et al. Identification of GBF1 as a cellular factor required for hepatitis E virus RNA replication. Cell Microbiol. 2018 Jan;20(1):e12804.

[3] Shen SM, Ji Y, Zhang C, et al. Nuclear PTEN safeguards pre-mRNA splicing to link Golgi apparatus for its tumor suppressive role. Nat Commun. 2018 Jun 19;9(1):2392.

[4] van der Linden L, van der Schaar HM, Lanke KH, et al. Differential effects of the putative GBF1 inhibitors Golgicide A and AG1478 on enterovirus replication. J Virol. 2010 Aug;84(15):7535-42.

[5] Liang W, Zheng M, Bao C, et al. CSFV proliferation is associated with GBF1 and Rab2. J Biosci. 2017 Mar;42(1):43-56.

[6] Sun X, Li Y, He Y, et al. Aberrant expression of GTPase-activating protein ARAP1 triggers circular dorsal ruffles associated with malignancy in hepatocellular carcinoma Hep3B cells. Cell Commun Signal. 2025 Feb 11;23(1):75.

[7] He Z, Xia B, Zhao T, et al. Clathrin-Independent Carriers/Glycosylphosphatidylinositol-Anchored-Protein-Enriched Endosomal Compartment Endocytic Pathway Is Critical for Enterovirus A71 Entry Into Human Oral Epidermoid Carcinoma KB Cells. J Med Virol. 2025 May;97(5):e70369.

[8] Zhang F, Zhang SH, Liu T, et al. Golgicide A induces pyroptosis of lung cancer stem cells by regulating dTGN formation via GOLPH3/MYO18A complex. Stem Cell Res Ther. 2025 Mar 7;16(1):121.

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