

Product Data Sheet

Product Name: Elaiophylin
Cat. No.: GC12846

Chemical Properties

Cas. No. 37318-06-2

Chemical Name (3E,5E,7S,8S,11E,13E,15S,16S)-8,16-bis[(2S,3R,4S)-4-[(2R,4R,5R,6R)-4-[(2R,4S,5S,6S)-4,5-dihydroxy-6-methyloxan-2-yl]oxy-5-ethyl-2-hydroxy-6-methyloxan-2-yl]-3-hydroxypentan-2-yl]-7,15-dimethyl-1,9-dioxacyclohexadeca-3,5,11,13-tetraene-2,10-dione

SMILES CCC1C(OC(CC1OC2CC(C(C(O2)C)O)O)(C(C)C(C(C)C3C(C=CC=CC(=O)OC(C(C=CC=CC(=O)O3)C)C(C)C(C(C)C4(CC(C(C(O4)C)CC)OC5CC(C(C(O5)C)O)O)O)C)O)O)C

Formula C₅₄H₈₈O₁₈

M.Wt 1025.27

Solubility DMF: Soluble,DMSO: Soluble,Ethanol: Soluble,Methanol: Soluble

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

Elaiophylin (Azalomycin B; Gopalamicin; Efomycin E) is an autophagy inhibitor, exerts antitumor activity as a single agent in ovarian cancer cells[1].

Elaiophylin-mediated autophagy inhibition and lysosomal dysfunction affect ovarian cancer cell survival during hypoxia. Exposure to Elaiophylin (0.025-0.5 μM; 24 hours) causes a significant increase in ovarian cancer SKOV3 cell death in hypoxia conditions[1]. In both the SKOV3 and A2780 cell lines, Elaiophylin (0.25, 0.5, 0.75 μM; 24 hours) treatment leads to significant activation of cleaved CASP9/caspase-9 and PARP1 and downregulation of BIRC5/survivin in a concentration-dependent manner[1].

Treatment with 2 mg/kg Elaiophylin (given i.p. every 2 days for 21 days; in BALB/C athymic mice) significantly suppresses ovarian cancer SKOV3 cells growth compared with DMSO treatment, resulting in a 72% decrease in the average daily tumor growth rate compared with DMSO treatment [1]. Lower doses of Elaiophylin as a single agent exert significant antitumor activity, while higher doses lead to intestinal toxicity. Administration of a lower dose (2 mg/kg) of Elaiophylin as a single agent achieves a significant antitumor effect without toxicity in an orthotopic ovarian cancer model with metastasis. Toxic reactions are observed only in the 8 mg/kg group[1].

References:

[1]. Zhao X, et al Elaiophylin, a novel autophagy inhibitor, exerts antitumor activity as a single agent in ovarian cancer cells. *Autophagy*. 2015;11(10):1849-63.

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

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