

Product Data Sheet

Product Name: Benastatin A

Cat. No.: GC49042

Chemical Properties

Cas. No. 138968-85-1

SMILES O=C(C1=C(CCCCC)C=C(C=CC2=C(C3=C(C=C24)C(C)(C)C5=C(C(O)=CC(O)=C5)C3=O)O)C4=C1O)O

Formula C₃₀H₂₈O₇

M.Wt 500.5

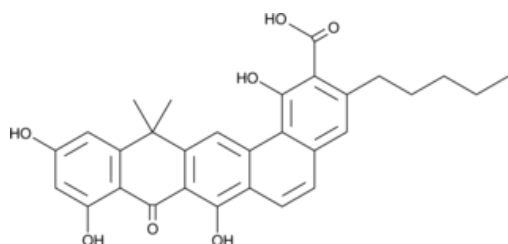
Solubility N/A

Storage -20°C

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

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

Benastatin A is a polyketide synthase-derived benastatin that has been found in *Streptomyces* and has diverse biological activities.^{1,2,3} It inhibits glutathione S-transferase (GST; K_i = 5 μM for the rat liver enzyme).² Benastatin A is active against several bacteria, including methicillin-resistant *S. aureus* (MRSA; MIC = 3.12 μg/ml). It induces apoptosis and cell cycle arrest at the G₁/G₀ phase in Colon 26 mouse colon cancer cells when used at concentrations of 20 and 16 μM, respectively.³

1. Xu, Z., Schenk, A., and Hertweck, C. Molecular analysis of the benastatin biosynthetic pathway and genetic engineering of altered fatty acid-polyketide hybrids. *J. Am. Chem. Soc.* 129(18):6022-6030 (2007) 2. Aoyagi, T., Aoyama, T., Kojima, F., et al. Benastatins A and B, new inhibitors of glutathione S-transferase, produced by *Streptomyces* sp. MI384-DF12. I. Taxonomy, production,

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

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isolation, physico-chemical properties and biological activitiesJ. Antibiot. (Tokyo)45(9)1385-1390(1992) 3.Kakizaki, I., Ookawa, K., Ishikawa, T., et al.Induction of apoptosis and cell cycle arrest in mouse colon 26 cells by benastatin AJpn. J. Cancer Res.91(11)1161-1168(2000)

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