

PRODUCT INFORMATION



Benastatin B

Item No. 32893

CAS Registry No.: 138968-86-2
Formal Name: 5,6,8,13-tetrahydro-1,7,9,11-tetrahydroxy-13,13-dimethyl-8-oxo-3-pentyl-benzo[a]naphthacene-2-carboxylic acid

MF: $C_{30}H_{30}O_7$

FW: 502.6

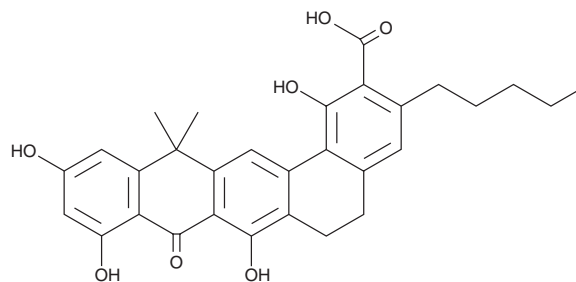
Purity: $\geq 90\%$

Supplied as: A solid

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Bacterium/*Streptomyces* sp.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Benastatin B is supplied as a solid. A stock solution may be made by dissolving the benastatin B in the solvent of choice, which should be purged with an inert gas. Benastatin B is soluble in DMSO.

Description

Benastatin B is a polyketide synthase-derived benastatin that has been found in *Streptomyces* and has diverse biological activities.¹⁻³ It inhibits glutathione S-transferase (GST; $K_i = 3.7 \mu\text{M}$ for the rat liver enzyme).² Benastatin B also inhibits the transglycosylase activity of *A. baumannii*, *C. difficile*, *E. coli*, and *S. aureus* recombinant penicillin-binding proteins (PBPs; $\text{IC}_{50}\text{s} = 16, 53.3, 30.7, \text{ and } 31.6 \mu\text{M}$, respectively).³ It is active against several bacteria, including methicillin-resistant *S. aureus* (MRSA; $\text{MIC} = 3.12 \mu\text{g/ml}$).²

References

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, isolation, physico-chemical properties and biological activities. *J. Antibiot. (Tokyo)* **45**(9), 1385-1390 (1992).
3. Wu, W.-S., Cheng, W.-C., Cheng, T.-J.R., *et al.* Affinity-based screen for inhibitors of bacterial transglycosylase. *Am. Chem. Soc.* **140**(8), 2752-2755 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/07/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM