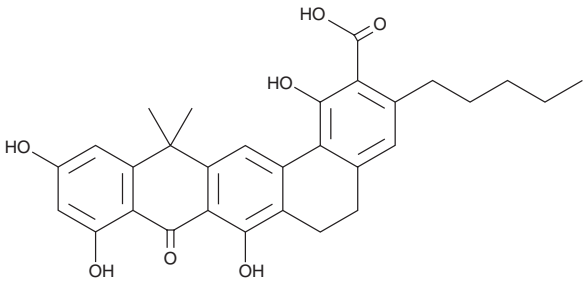
PRODUCT INFORMATION

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: ≥90%
Supplied as: A powder
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 powder. 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 µM 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; IC_{50}s = 16, 53.3, 30.7, and 31.6 µM, respectively).[3] It is active against several bacteria, including methicillin-resistant S. aureus (MRSA; MIC = 3.12 µg/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).

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