

PRODUCT INFORMATION



Baccatin III

Item No. 21404

CAS Registry No.: 27548-93-2
Formal Name: (2aR,4S,4aS,6R,9S,11S,12S,12aR,12bS)-6,12b-bis(acetyloxy)-12-(benzyloxy)-1,2a,3,4,4a,6,9,10,11,12,12a,12b-dodecahydro-4,9,11-trihydroxy-4a,8,13,13-tetramethyl-7,11-methano-5H-cyclodeca[3,4]benz[1,2-b]oxet-5-one

Synonym: NSC 330753

MF: C₃₁H₃₈O₁₁

FW: 586.6

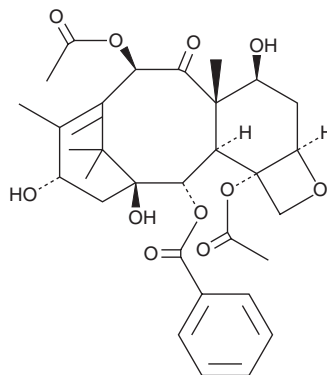
Purity: ≥98%

UV/Vis.: λ_{max}: 229 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Baccatin III is supplied as a crystalline solid. A stock solution may be made by dissolving the baccatin III in the solvent of choice, which should be purged with an inert gas. Baccatin III is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of baccatin III in these solvents is approximately 20 mg/ml.

Description

Baccatin III is a polycyclic diterpene originally isolated from the yew tree (*Taxus*) that is a precursor of paclitaxel (Item No. 10461).^{1,2} Baccatin III induces apoptosis in JR4-Jurkat leukemia, HepG2 liver hepatocellular carcinoma, HeLa cervical, OVCAR-3 ovarian carcinoma, and T47D breast cancer cell lines (IC₅₀s = 3.5, 3, 4, 5, and 2 μM, respectively).³ It dose-dependently increases the antigen presenting cell (APC) capacity of bone marrow-derived dendritic cells (BM-DCs) sensitized to OVA peptide but does not affect their phagocytic activity.⁴ Baccatin III (0.5 mg/kg per day) decreases tumor growth of 4T1 mammary carcinoma and CT26 colon carcinoma flank implants by 65.6 and 63.9%, respectively, as well as inhibits the accumulation and activity of myeloid-derived suppressor cells (MDSCs) in spleen in immunocompetent mice.⁵

References

1. Chan, K.C., Alvarado, A.B., McGuire, M.T., et al. *J. Chromatogr. B Biomed. Appl* **657**(2), 301-306 (1994).
2. Kingston, D.G.I. Recent advances in the chemistry of taxol. *J. Nat. Prod.* **63**(5), 726-734 (2000).
3. Chakravarthi, B.V., Sujay, R., Kuriakose, G.C., et al. *Cancer Cell Int.* **13**(1) (2013).
4. Lee, Y.-H., Lee, Y.-R., Kim, K.-H., et al. *Int. Immunopharmacol.* **11**(8), 982-991 (2011).
5. Lee, Y.-H., Lee, Y.-R., Park, C.-S., et al. *Int. Immunopharmacol.* **21**(2), 487-493 (2014).

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.

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