**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-(benzoyloxy)-1,2a,3,4,4a,6,9,10,11,12a,12b-dodecahydro-4,9,11-trihydroxy-4a,8,13,13-tetramethyl-7,11-methano-5H-cycloeuc[3,4]benz[1,2-b]oxet-5-one  
**Synonym:** NSC 330753  
**MF:** C$_{31}$H$_{38}$O$_{11}$  
**FW:** 586.6  
**Purity:** ≥98%  
**UV/Vis.:** $\lambda_{max}$: 229 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 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. Baccatin III is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. 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 (IC$_{50}$s = 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**