



# 10-Deacetyl Baccatin III PRODUCT DATA SHEET

issue date 01/06/2020

<b>Product Name:</b>	10-Deacetyl Baccatin III
<b>Product Number:</b>	D002
<b>CAS Number:</b>	32981-86-5
<b>Molecular Formula:</b>	$C_{29}H_{36}O_{10}$
<b>Molecular Weight:</b>	544.59
<b>Form:</b>	Powder
<b>Appearance:</b>	White or off-White Powder
<b>Solubility:</b>	soluble in methanol. Insoluble in water and ethanol.
<b>Source:</b>	<i>Taxus Baccata</i>
<b>Storage Conditions:</b>	2-8 °C
<b>Description:</b>	10-Deacetyl Baccatin III (syn: 10-DAB) is a natural organic compound produced by the Pacific Yew tree. It is used as a key backbone intermediate for the semi-synthesis of Paclitaxel (Taxol), an anti-cancer drug and Docetaxel and their analogs. It is used to study the biosynthetic pathway of Taxol. The trunk and leaves contain the highest concentration of 10-Deacetyl Baccatin III, but it may be found in parts of the Yew tree.
<b>Mechanism of Action:</b>	Paclitaxel (Taxol) has a unique mode of action involving abnormal polymerization of tubulin and disruption of mitosis.
<b>Plant Biology Applications</b>	<i>Taxus</i> cell culture may be an alternate source of Paclitaxel, and significantly increased amounts of Paclitaxel were observed after exposure to methyl jasmonate (Yukimune et al, 1996).
<b>Cancer Applications</b>	10-Deacetyl Baccatin III is commonly used as an intermediate in the synthesis of paclitaxel (Taxol), an anti-cancer drug.

**References:**

- Gelderblom H et al (1999) Disposition of [G-(3)H]paclitaxel and cremophor EL in a patient with severely impaired renal function. *Drug Metab Dispos.* 27(11):1300-1305 PMID 10534315
- Gueritte-Voegelein F, Senih V, David B, Guenard D and Potier P (1986) Chemical studies of 10-deacetyl baccatin III: Hemisynthesis of taxol derivatives. *Tetrahed.* 42(16):4451-4460
- Kant J et al (1994) A chemoselective approach to functionalize the C-10 position of 10-deacetylbaccatin III. Synthesis and biological properties of novel C-10 Taxol® analogues. *Tetrahed. Lett.* 35(31):5543-5546
- Ojima I et al (1997) Syntheses and structure-activity relationships of toxoids derived from 14 beta-hydroxy-10-deacetylbaccatin III. *J. Med. Chem.* 40(3):267-278 PMID 9022793
- Yukimune Y, Tabata H, Higashi Y and Hara Y (1996) Methyl jasmonate-induced overproduction of paclitaxel and baccatin III in *Taxus* cell suspension cultures. *Nature Biotechnol.* 14(9):1129-1132

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