PRODUCT INFORMATION



Paclitaxel-d₅

Item No. 22092

CAS Registry No.:	1129540-33-5		
Formal Name:	βS-(benzoyl-2,3,4,5,6-d₅-amino)-αR-	D	
	hydroxy-benzenepropanoic acid, (2aR,		
	4S,4aS,6R,9S,11S,12S,12aR,12bS)-		
	6,12b-bis(acetyloxy)-12-(benzoyloxy)-		
	2a.3.4.4a.5.6.9.10.11.12.12a.12b-		и и со
	dodecahydro-4.11-dihydroxy-4a.8.13.13-	- ¥ -	
	tetramethyl-5-oxo-7.11-methano-1H-	, H	
	cvclodeca[3.4]benz[1.2-b]oxet-9-vl ester	0 ⁻ N	
MF:	$C_{47}H_{47}D_{5}NO_{44}$		
FW:	859.0		
Chemical Purity:	≥98% (Paclitaxel)		ÖH ¦ o
Deuterium		OH	
Incorporation:	≥99% deuterated forms (d ₁ -d ₅); ≤1% d ₀	\sim	
Supplied as:	A solid		
Storage:	-20°C		
Stability:	≥3 years		

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

Laboratory Procedures

Paclitaxel-d₅ contains five deuterium atoms. It is intended for use as an internal standard for the quantification of paclitaxel (Item No. 10461) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Paclitaxel- d_5 is supplied as a solid. A stock solution may be made by dissolving the paclitaxel- d_5 in the solvent of choice. Paclitaxel-d₅ is slightly soluble in methanol and chloroform.

Description

Paclitaxel is cytotoxic against a variety of cancer cell lines with IC_{50} values ranging from 2.5-7.5 nM.¹ It disrupts multipolar spindle formation, inducing cell cycle arrest in various human cell cancer lines $(IC_{50}s = 6.7-18.5 \text{ nM})$ at both prophase and G_1^2 It also initiates apoptosis of cancer cells through multiple mechanisms involving p53-dependent and -independent pathways, Bcl-2 family members, cyclin-dependent kinases, and c-Jun N-terminal kinases/stress-activated protein kinases.³

References

- 1. Liebmann, J.E., Cook, J.A., Lipschultz, C., et al. Cytotoxic studies of paclitaxel (Taxol) in human tumour cell lines. Br. J. Cancer 68(6), 1104-1109 (1993).
- 2. Woods, C.M., Zhu, J., McQueney, P.A., et al. Taxol-induced mitotic block triggers rapid onset of a p53-independent apoptotic pathway. Mol. Med. 1(5), 506-526 (1995).
- 3. Wang, T.h., Wang, H.S., and Soong, Y.K. Paclitaxel-induced cell death: Where the cell cycle and apoptosis come together. Cancer 88(11), 2619-2628 (2000).

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

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