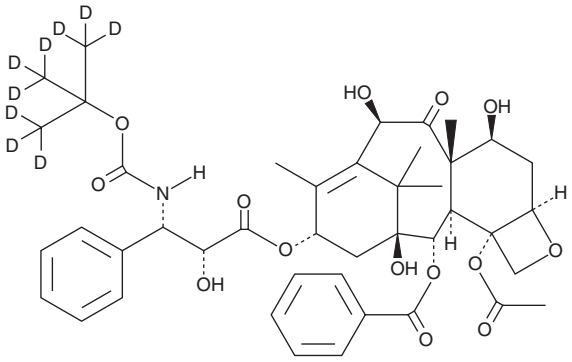
PRODUCT INFORMATION

Docetaxel-d_9

Item No. 22094

CAS Registry No.: 940867-25-4
Formal Name: (αR,βS)-β-[[(1,1-dimethylethoxy)carbonyl]amino]-α-hydroxy-benzenepropanoic acid, β-[[[1,1-di(methyl-d_3) ethoxy-2,2,2-d_3]carbonyl]amino]-α-hydroxy-12b-(acetyloxy)-12-(benzoyloxy)-2aR,3,4S,4aS,5,6R,9S,10,11S,12S,12aR,12bS-dodecahydro-4,6,11-trihydroxy-4a,8,13,13-tetramethyl-5-oxo-7,11-methano-1H-cyclodeca[3,4]benz[1,2-b]oxet-9-yl ester
Synonyms: DTX-d_9 , Taxotel-d_9
MF: $C_{43}H_{44}D_9NO_{14}$
FW: 816.9
Chemical Purity: ≥98% (Docetaxel)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_9); ≤1% d_0
Supplied as: A 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

Docetaxel-d_9 is intended for use as an internal standard for the quantification of docetaxel (Item No. 11637) 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).

Docetaxel-d_9 is supplied as a solid. Docetaxel-d_9 is slightly soluble in chloroform and methanol.

Description

Docetaxel is a microtubule-stabilizing agent and a semisynthetic derivative of paclitaxel (Item No. 10461).[1] It promotes microtubule assembly in a cell-free assay when used at a concentration of 20 µM and is cytotoxic to J774.2 cells (EC_{50} = 0.05 µM).[2] *In vivo*, docetaxel inhibits tumor growth in several cancer models, including B16 murine melanoma and P388 murine leukemia models.[1] Formulations containing docetaxel have been used in the treatment of head and neck, breast, and non-small cell lung cancer, gastric adenocarcinoma, and castration-resistant prostate cancer.

References

1. Bissery, M. C., Guenard, D., Gueritte-Voegelein, F. *et al.* Experimental antitumor activity of taxotere (RP 56976, NSC 628503), a taxol analogue. *Cancer Research* **51(18)**, 4845-4852 (1991).
2. Swindell, C.S., Heerding, J.M., Krauss, N.E., *et al*. Characterization of the taxol structure-activity profile for the locus of the A-ring side chain. *Bioorg. Med. Chem. Lett*. **4(12)**, 1531-1536 (1994).

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