

PRODUCT INFORMATION



Trabectedin

Item No. 34662

CAS Registry No.: 114899-77-3

Formal Name: (1'R,6R,6aR,7R,13S,14S,16R)-5-(acetyloxy)-3',4',6,6a,7,13,14,16-octahydro-6',8,14-trihydroxy-7',9-dimethoxy-4,10,23-trimethyl-spiro[6,16-(epithiopropoxy)methano]-7,13-imino-12H-1,3-dioxolo[7,8]isoquino[3,2-b][3]benzocine-20,1'(2'H)-isoquinolin]-19-one

Synonyms:

MF: C₃₉H₄₃N₃O₁₁S

FW: 761.8

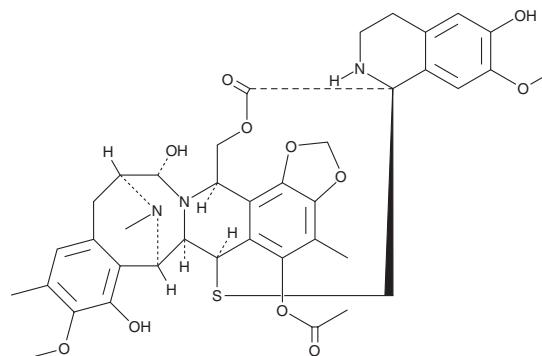
Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Synthetic



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

Laboratory Procedures

Trabectedin is supplied as a solid. A stock solution may be made by dissolving the trabectedin in the solvent of choice, which should be purged with an inert gas. Trabectedin is slightly soluble in chloroform and methanol.

Description

Trabectedin is an alkaloid that has been found in *E. turbinata* and has anticancer activity.¹⁻⁴ It is a guanine-specific DNA alkylating agent and an antagonist of the pregnane X receptor (PXR; IC₅₀ = ~3 nM in a reporter assay).^{1,2} Trabectedin reduces viability of DU145 and PC3 human prostate cancer stem cells in a concentration-dependent manner and induces apoptosis in DU145 and PC3 cancer stem cells and DU145 and PC3 non-stem cancer cells.³ It inhibits tumor growth in a patient-derived orthotopic xenograft (PDOX) mouse model of leiomyosarcoma when administered at a dose of 0.15 mg/kg per week.⁴ Formulations containing trabectedin have been used in the treatment of unresectable or metastatic liposarcoma or leiomyosarcoma.

References

1. Pommier, Y., Kohlhagen, G., Bailly, C., *et al.* DNA sequence- and structure-selective alkylation of guanine N2 in the DNA minor groove by ecteinascidin 743, a potent antitumor compound from the Caribbean tunicate *Ecteinascidia turbinata*. *Biochemistry* **35**(41), 13303-13309 (1996).
2. Synold, T.W., Dussault, I., and Forman, B.M. The orphan nuclear receptor SXR coordinately regulates drug metabolism and efflux. *Nat. Med.* **7**(5), 584-590 (2001).
3. Acikgoz, E., Guven, U., Duzagac, F., *et al.* Enhanced G2/M arrest, caspase related apoptosis and reduced E-cadherin dependent intercellular adhesion by trabectedin in prostate cancer stem cells. *PLoS One* **10**(10), e0141090 (2015).
4. Zhang, Z., Hu, K., Kiyuna, T., *et al.* A patient-derived orthotopic xenograft (PDOX) nude-mouse model precisely identifies effective and ineffective therapies for recurrent leiomyosarcoma. *Pharmacol. Res.* **142**, 169-175 (2019).

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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