

PRODUCT INFORMATION

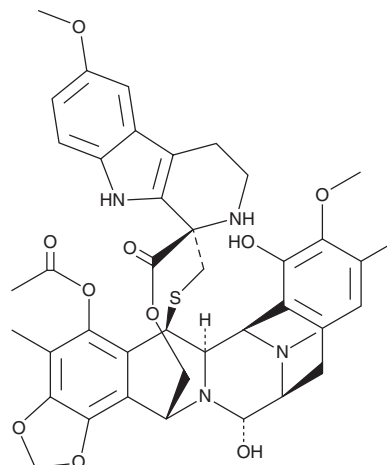


Lurbinectedin

Item No. 44852

CAS Registry No.: 497871-47-3
Formal Name: (1'R,6R,6aR,7R,13S,14S,16R)-5-(acetyloxy)-2',3',4',6,6a,7,9',13,14,16-decahydro-8,14-dihydroxy-6',9-dimethoxy-4,10,23-trimethyl-spiro[6,16-(epithiopropoxymethano)-7,13-imino-12H-1,3-dioxolo[7,8]isoquino[3,2-b][3]benzazocine-20,1'-[1H]pyrido[3,4-b]indol]-19-one

Synonym: PM01183
MF: C₄₁H₄₄N₄O₁₀S
FW: 784.9
Purity: ≥98%
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

Lurbinectedin is supplied as a solid. A stock solution may be made by dissolving the lurbinectedin in the solvent of choice, which should be purged with an inert gas. Lurbinectedin is sparingly soluble (1-10 mg/ml) in chloroform and slightly soluble (0.1-1 mg/ml) in acetonitrile:water (1:1).

Description

Lurbinectedin is a DNA alkylating agent.¹ It induces DNA double-strand breaks (DSBs), cell cycle arrest at the S phase, and apoptosis in A549 lung cancer cells. Lurbinectedin is cytotoxic against a panel of 24 cancer cell lines with a mean GI₅₀ value of 2.7 nM. It increases the levels of cyclic GMP-AMP (cGAMP) synthase (cGAS) and phosphorylated STING, TANK-binding kinase 1 (TBK1), and IFN regulatory factor 3 (IRF3) in PB115, DMS 114, NCI H446, and NCI H196 lung cancer cells when used at a concentration of 10 nM.² Lurbinectedin (0.18 mg/kg) decreases tumor weight in NCI H460 lung, A2780 ovarian, HT-29 colon, and HGC-27 gastric cancer mouse xenograft models.¹ It also decreases tumor volume when used in combination with an antibody targeting programmed cell death 1 ligand 1 (PD-L1) in an immunocompetent genetically engineered mouse model of small cell lung cancer (SCLC).² Formulations containing lurbinectedin have been used in the treatment of metastatic SCLC.

References

1. Leal, J.F., Martínez-Díez, M., García-Hernández, V., *et al.* PM01183, a new DNA minor groove covalent binder with potent *in vitro* and *in vivo* anti-tumour activity. *Br. J. Pharmacol.* **161**(5), 1099-1100 (2010).
2. Chakraborty, S., Sen, U., Ventura, K., *et al.* Lurbinectedin sensitizes PD-L1 blockade therapy by activating STING-IFN signaling in small-cell lung cancer. *Cell Rep. Med.* **5**(12), 101852 (2024).

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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