# **PRODUCT** INFORMATION



## Ixabepilone

Item No. 23732

CAS Registry No.:	219989-84-1	/
Formal Name:	(1S,3S,7S,10R,11S,12S,16R)-7,11-dihydroxy-	s
	8,8,10,12,16-pentamethyl-3-[(1E)-1-methyl-	
	2-(2-methyl-4-thiazolyl)ethenyl]-17-oxa-4-	
	azabicyclo[14.1.0]heptadecane-5,9-dione	
Synonyms:	Azaepothilone B, BMS-247550	
MF:	C <sub>27</sub> H <sub>42</sub> N <sub>2</sub> O <sub>5</sub> S	Й о он
FW:	506.7	
Purity:	≥98%	
UV/Vis.:	λ <sub>max</sub> : 211, 247 nm	И Н Х
Supplied as:	A crystalline solid	
Storage:	-20°C	O O
Stability:	≥4 years	OH

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

#### Laboratory Procedures

Ixabepilone is supplied as a crystalline solid. A stock solution may be made by dissolving the ixabepilone in the solvent of choice, which should be purged with an inert gas. Ixabepilone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ixabepilone in ethanol and DMF is approximately 20 mg/ml and approximately 15 mg/ml in DMSO.

Ixabepilone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ixabepilone should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ixabepilone has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Ixabepilone is an epothilone with broad-spectrum anticancer activity against a panel of 21 cancer cell lines (IC<sub>50</sub>s = 1.4-34.5 nM).<sup>1</sup> It stabilizes and induces the polymerization of microtubules and induces cell cycle arrest during mitosis. Ixabepilone is cytotoxic to HCT116/VM46 and A2780Tax clonogenic cells, which are resistant to paclitaxel (Item No. 10461;  $IC_{90}s = 16$  and 12.3 nM, respectively, for colony growth inhibition). In vivo, ixabepilone (6.3 and 10 mg/kg, i.v., respectively) shows antitumor activity in paclitaxel-resistant human Pat-21 breast carcinoma and HCT116/VM46 colon carcinoma mouse xenograft models with log cell kill (LCK) values of 1.6 and 2.4, respectively. Ixabepilone (10 mg/kg, i.v.) also increases the time for tumors to quadruple in volume by 7.2, 9, 6.5, 4.7, and >10 weeks, respectively, in mice implanted with Rh18 rhabdomyosarcoma, NB1643 neuroblastoma, WT5 Wilms' tumor, OS29 osteosarcoma, and BT29 brain carcinoma cells.<sup>2</sup> Formulations containing ixabepilone have used in the treatment of metastatic breast cancer.<sup>3</sup>

#### References

- 1. Lee, F.Y., Borzilleri, R., Fairchild, C.R., et al. BMS-247550: A novel epothilone analog with a mode of action similar to paclitaxel but possessing superior antitumor efficacy. Clin. Cancer Res. 7(5), 1429-1437 (2001).
- 2. Peterson, J.K., Tucker, C., Favours, E., et al. In vivo evaluation of ixabepilone (BMS247550), a novel epothilone B derivative, against pediatric cancer models. Clin. Cancer Res. 11(19 Pt 1), 6950-6958 (2005).
- 3. Cheng, K.L., Bradley, T., and Budman, D.R. Novel microtubule-targeting agents the epothilones. Biologics 2(4), 789-811 (2008).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY 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

uyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/24/2022

### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM