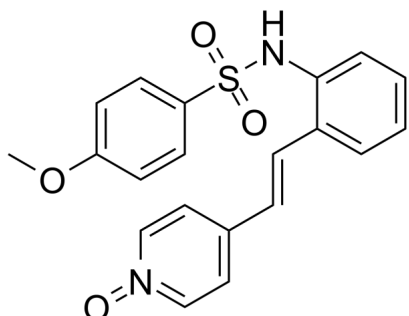


Certificate of Analysis

Catalog Number	BP13260
Product Name	HMN-176

Physical and Chemical Properties

Synonyms	HMN 176, HMN176
CAS No.	173529-10-7
Chemical Formula	C ₂₀ H ₁₈ N ₂ O ₄ S
Molecular Weight	382.43
Solubility	DMSO: 30 mg/mL
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	HMN-176 is a stilbene derivative which inhibits mitosis, interfering with polo-like kinase-1 (plk1).
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In vitro	<p>HMN-176 (2.5 μM) greatly increases the duration of mitosis in hTERT-RPE1 and CFPAC-1 Cell lines. The effect of HMN-176 on spindle morphology does not appear to be related to effects on microtubule polymerization. HMN-176 (2.5, 0.25, and 0.025 μM) inhibits aster formation in a concentration dependent manner. HMN-176 (0.1, 1.0, or 10.0 μg/mL) demonstrates inhibitory effects in multiple tumors, with notable activity seen in breast, nonsmall-cell lung, and ovarian cancer specimens. HMN-176 demonstrates activity towards 63% of the breast (5/8), 67% of the non-small cell lung (4/6), and 57% of the ovarian (4/7) tumor specimens treated with 10.0 μg/mL. HMN-176 shows potent cytotoxicity, with a mean IC₅₀ value of 118 nM. HMN-176 displays similar cytotoxicity against tumors with various characteristics from different organs. Treatment with 3 μM HMN-176 suppresses the expression of MDR1 mRNA by 56%. HMN-176 has no significant effect on the residual promoter activity.</p>
In vivo	<p>HMN-176 prevents spindle assembly and meiosis in Spisula oocytes by inhibiting centrosome-dependent MT nucleation, i.e., aster formation. Oocytes treated with 0.25 μM HMN-176 undergoes GVBD, but asters or spindles fails to form, even after prolonged periods. After p.o. of HMN-214 to male rats, the prodrug is not detected in the plasma, while plasma levels of HMN-176 peaks at 2 h and gradually decreases thereafter.</p>

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	<p>Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.</p>

Purdue Bioscience Inc.

750 50th St, Brooklyn, NY 11220, USA

<https://www.purduebio.com>

1-877.618.7311

info@purduebio.com

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