Print Date: Jul 6th 2022

Certificate of Analysis

www.tocris.com

Product Name: **Panobinostat** **Catalog No.: 7629** **Batch No.: 1**

CAS Number: 404950-80-7

IUPAC Name: (2*E*)-*N*-Hydroxy-3-[4-[[[2-(2-methyl-1*H*-indol-3-yl)ethyl]amino]methyl]phenyl]-2-propenamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{21}H_{23}N_3O_2.H_2O$

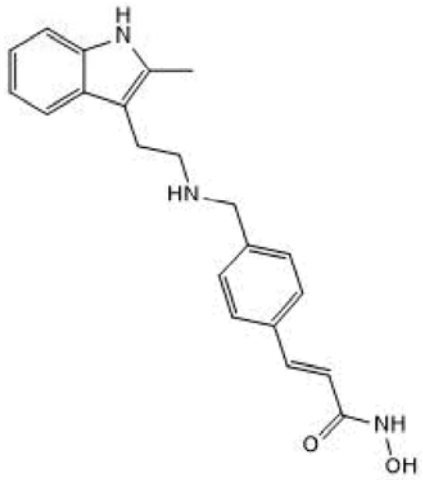
Batch Molecular Weight: 367.45

Physical Appearance: Beige solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	68.64	6.86	11.44
Found	68.56	6.9	11.46

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Information

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Description:

Panobinostat is a potent pan-histone deacetylase (HDAC) inhibitor (IC_{50} values = 2.1 - 531 nM). Panobinostat induces histone H3 and H4 acetylation and potently inhibits cell proliferation and cell viability in HH, BT474 and HCT116 cells (IC_{50} are 1.8, 2.6 and 7.1 nM, respectively) in vitro. It leads to significant tumor regression of up to 94% in an HH CTCL mouse xenograft model. Panobinostat inhibits the DNA binding activity of STAT5 in leukemia cell lines and acts synergistically with 17-AAG (Cat. No. 1515) to induce apoptosis. The compound shows potent antimyeloma activity, including in drug-resistant cell lines. Panobinostat also induces ... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

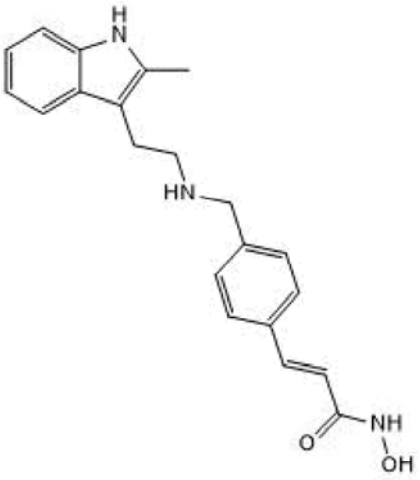
Batch Molecular Formula: $C_{21}H_{23}N_3O_2.H_2O$

Batch Molecular Weight: 367.45

Physical Appearance: Beige solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Takahashi *et al* (2021) Histone deacetylase inhibitors suppress ACE2 and ABO simultaneously, suggesting a preventive potential against COVID-19. Sci.Rep. ***11*** (1) 3379. PMID: 33564039.

Barton *et al* (2016) Broad activation of latent HIV-1 *in vivo*. Nat.Commun. ***7*** 12731. PMID: 27605062.

Atadja (2009) Development of the pan-DAC inhibitor panobinostat (LBH589): successes and challenges. Cancer Lett. ***280*** (2) 233. PMID: 19344997.