

Product Name: Belinostat

Catalog No.: 7981

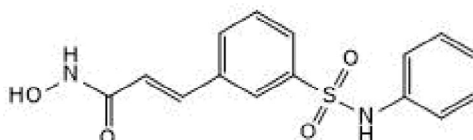
Batch No.: 1

CAS Number: 866323-14-0

IUPAC Name: (2*E*)-*N*-Hydroxy-3-[3-[(phenylamino)sulfonyl]phenyl]-2-propenamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₁₄N₂O₄S.
Batch Molecular Weight: 318.35
Physical Appearance: Off White solid
Solubility: DMSO to 100 mM
 ethanol to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100.0% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	56.59	4.43	8.8
Found	56.55	4.45	8.83

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: (2E)-N-Hydroxy-3-[3-[(phenylamino)sulfonyl]phenyl]-2-propenamide

Description:

Belinostat is a potent pan-HDAC inhibitor (IC₅₀ = 28 nM). Dose-dependently reduces tumor volume in a rat model of glioblastoma and induces 70% and 28% apoptosis in LN-229 and LN-18 glioma cell lines (IC₅₀ values are 210 nM and 300 nM respectively). In H358 cells, Belinostat dose-dependently reduces cell viability and upregulates amino acids and metabolites of the TCA and urea cycle. Also potently inhibits C4 release from astrocytes and shows antidepressant activity. Belinostat is brain penetrant.

Physical and Chemical Properties:

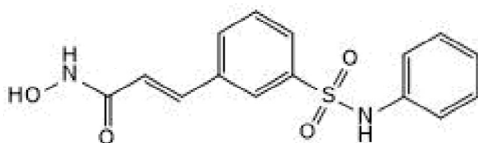
Batch Molecular Formula: C₁₅H₁₄N₂O₄S.

Batch Molecular Weight: 318.35

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Rapino et al (2023) Small-molecule screen reveals pathways that regulate C4 secretion in stem cell-derived astrocytes. *Stem Cell Reports* **18** 237. PMID: 36563689.

Peter et al (2022) Histone deacetylase inhibitor belinostat regulates metabolic reprogramming in killing KRAS-mutant human lung cancer cells. *Mol.Carcinog.* **62** 1136. PMID: 37144836.

Gurbani et al (2019) Assessing treatment response of glioblastoma to an HDAC inhibitor using whole-brain spectroscopic MRI. *Tomography* **5** 53. PMID: 30854442.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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.

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