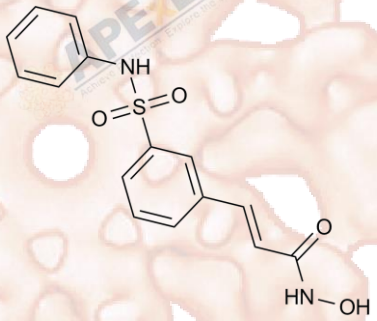
Product Data Sheet

Belinostat (PXD101)

Cat. No.:	A4096
CAS No.:	414864-00-9
Formula:	C15H14N2O4S
M.Wt:	318.35
Synonyms:	PXD-101, PXD 101, PX105684, PX-105684
Target:	DNA Damage/DNA Repair
Pathway:	HDAC
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

insoluble in H2O; ⩾15.92 mg/mL in DMSO; ⩾44.1 mg/mL in EtOH with ultrasonic

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	3.1412 mL	15.7060 mL	31.4120 mL
5 mM	0.6282 mL	3.1412 mL	6.2824 mL
10 mM	0.3141 mL	1.5706 mL	3.1412 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Hydroxamate-type HDAC inhibitor
IC_{50} & Target	27 nM (pan-HDAC)

In Vitro

Cell Viability Assay

Cell Line:	The human urinary bladder carcinoma cell lines 5637, T24, J82 and RT4.
Preparation method:	Soluble in DMSO > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	1-5 μM; 48 h.

	Applications:	In human urinary bladder carcinoma cell lines, belinostat (PXD101) inhibits cell proliferation in a dose dependent way with IC50 values of 1.0, 3.5, 6.0 and 10.0 μM in 5637, T24, J82 and RT4 cell lines, respectively. Belinostat (PXD101) (5 μM) decreases in cell growth and proliferation by 71%, 51%, 41% and 23% in 5637, T24, J82 and RT4 cell lines, respectively. Also, belinostat reduces cells in the S phase and increases cells in the G0-G1 phase.
In Vivo	**Animal experiment**	
	Animal models:	UPII-Ha-ras transgenic mice.
	Dosage form:	100 mg/kg; 5 days each week for 3 weeks; intraperitoneal (IP) injections.
	Applications:	In UPII-Ha-ras transgenic mice, belinostat reduces the weights of Ras-expressing bladders of the male and female transgenic mice by 50% and 36%, respectively. Belinostat inhibits progression of bladder disease. Belinostat shows no detectable toxicity as evaluated by weight.
	Preparation method:	Dissolved in L-Arginine to give a final concentration of 20 mg/ml.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1.Bagnall NH, Hines BM, et al."Insecticidal activities of histone deacetylase inhibitors against a dipteranparasite of sheep, Lucilia cuprina." Int J Parasitol Drugs Drug Resist. 2017Apr;7(1):51-60.PMID:28110187

2. Hai Y, Christianson DW. "Histone deacetylase 6 structure and molecular basis of catalysis and inhibition." Nat Chem Biol. 2016 Jul 25.PMID:27454933

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References

[1]. Plumb JA, Finn PW, Williams RJ, et al. Pharmacodynamic response and inhibition of growth of human tumor xenografts by the novel histone deacetylase inhibitor PXD101. Mol Cancer Ther, 2003, 2(8): 721-728.

[2]. Buckley MT, Yoon J, Yee H, et al. The histone deacetylase inhibitor belinostat (PXD101) suppresses bladder cancer cell growth in vitro and in vivo. J Transl Med, 2007, 5: 49.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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