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## DATASHEET

### Tubacin

## Product overview

Name	Tubacin
Cat No	HB1403
Alternative names	Tubulin acetylation inducer
Biological action	Inhibitor
Purity	>98%
Description	Selective HDAC6 inhibitor

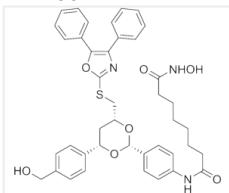
## Biological Data

Biological description	Selective histone deacetylase 6 (HDAC6) inhibitor. Selective for HDAC6 over HDAC3, 8, 1, 5, 10, 11, 9, 2, 7 and 4 ( $IC_{50}$ values are 4 nM and 1.27, 1.27, 1.4, 3.35, 3.71, 3.79, 4.31, 6.27, 9.7 and 17.3 $\mu$ M respectively). Induces tubulin acetylation. Shows anti-cancer, anti-proliferative and apoptotic actions.
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## Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in DMSO (10mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

## Chemical Data

Chemical name	<i>N</i> -[4-[(2 <i>R</i> ,4 <i>R</i> ,6 <i>S</i> )-4-[[4,5-Diphenyl- 2-oxazolyl)thio]methyl]-6-[4-(hydroxymethyl)phenyl]-1,3-dioxan-2-yl]phenyl]- <i>N'</i> -hydroxyoctanediamide
Molecular Weight	721.86
Chemical structure	 A complex organic molecule consisting of a central dioxane ring fused with a thiazole ring. The thiazole ring has a diphenyl-2-oxazolyl group at position 4 and a phenyl group at position 6. The dioxane ring is substituted with a hydroxymethyl group at position 4 and a long-chain octanediamide side chain at position 1. The side chain includes a hydroxyl group, a phenyl ring, and a terminal amide group.
Molecular Formula	C <sub>41</sub> H <sub>43</sub> N <sub>3</sub> O <sub>7</sub> S
CAS Number	1350555-93-9
PubChem identifier	6675804
SMILES	OCC(C=C4)=CC=[C@@]4[C@H]1C[C@H](CSC2=NC(C6=CC=CC=C6)=C(C5=CC=CC=C5)O2)O[C@H]([C@]3=CC=C(NCCCCCCC(=O)O)C=C3)O1
InChIKey	BHUZLJOUHMBZQY-YXQOSMAKSA-N

## References

Rational design and simple chemistry yield a superior, neuroprotective HDAC6 inhibitor, tubastatin A.

Butler KV *et al* (2010) J Am Chem Soc 132(31)

PubMedID

20614936

**Domain-selective small-molecule inhibitor of histone deacetylase 6 (HDAC6)-mediated tubulin deacetylation.**

Haggarty SJ *et al* (2003) Proc Natl Acad Sci U S A 100(8)

PubMedID

12677000

**Tubacin suppresses proliferation and induces apoptosis of acute lymphoblastic leukemia cells.**

Aldana-Masangkay GI *et al* (2011) Leuk Lymphoma 52(8)

PubMedID

21699378

**Tubacin kills Epstein-Barr virus (EBV)-Burkitt lymphoma cells by inducing reactive oxygen species and EBV lymphoblastoid cells by inducing apoptosis.**

Kawada J *et al* (2009) J Biol Chem 284(25)

PubMedID

19386607

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