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DATASHEET

Trichostatin A

Product overview

Name	Trichostatin A
Cat No	HB1402
Alternative names	TSA
Biological action	Inhibitor
Purity	>98%
Description	Potent HDAC inhibitor. Induces hiPSCs differentiation to cardiogenic cells and induces accelerated dedifferentiation of primordial germ cells.

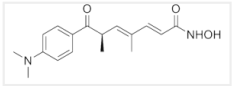
Biological Data

Biological description	Potent histone deacetylase (HDAC) inhibitor. Inhibits HDAC1, 3, 2, 6, 8 and 5 (IC_{50} values are 0.4, 1, 1.3, 2, 90 and 520 nM respectively). Shows anti-proliferative and anti-cancer actions. Also induces hiPSCs differentiation to cardiogenic cells and induces accelerated dedifferentiation of primordial germ cells.

Solubility & Handling

Storage instructions	-20°C (desiccate)
Solubility overview	Soluble in DMSO (50mM) and in ethanol (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	(2*E*,4*E*,6*R*)-7-(4-(Dimethylamino)phen yl)-*N*-hydroxy-4,6-dimethyl-7-oxo-2,4-heptadienamid e
Molecular Weight	302.37
Chemical structure	
Molecular Formula	$C_{17}H_{22}N_2O_3$
CAS Number	58880-19-6
PubChem identifier	444732
SMILES	C[C@H](/C=C(\C)/C=C/C(=O)NO)C(=O)C1=CC=C(C=C1)N(C)C
InChi	InChI=1S/C17H22N2O3/c1-12(5-10-16(20)18-22)11-13(2)17(21)14-6-8-15(9-7-14)19(3)4/h5-11,13,22H,1-4H3,(H,18,20)/b10-5+,12-11+/t13-/m1/s1
InChiKey	RTKIYFITIVXBLE-QEQCGCAPSA-N
MDL number	MFCD03848392

References

Synapse microarray identification of small molecules that enhance synaptogenesis.

Shi P *et al* (2011) Nat Commun 2

PubMedID 22027590

Inhibition of mitogenesis in Balb/c-3T3 cells by Trichostatin A. Multiple alterations in the induction and activation of cyclin-cyclin-dependent kinase complexes.

Wharton W *et al* (2000) J Biol Chem 275(43)
PubMedID 10945992

Trichostatin A is a histone deacetylase inhibitor with potent antitumor activity against breast cancer in vivo.

Vigushin DM *et al* (2001) Clin Cancer Res 7(4)
PubMedID 11309348