NEUROMICS

Trichostatin A Data Sheet

Catalog Number:	MC11103	**Product Type:**	Small Molecule
Bio-Activity:	HDAC inhibitor	**CAS #:**	58880-19-6
Research Categories:	Epigenetics, stem cells, cell death, infectious disease, cancer	**Chemical Name:**	(2E,4E,6R)-7-(4-(Dimethylamino)phenyl)-N-hydroxy-4,6-dimethyl-7-oxo-2,4-heptadienamide
Solubility:	Soluble in DMSO (up to 20 mg/ml), or in Ethanol (up to 3 mg/ml).	**Molecular Formula:**	C17H22N2O3
Purity:	> 98%	**Molecular Weight:**	302.4
Format:	Powder	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
Potent and selective histone deacetylase (HDAC) inhibitor (Ki = 3.4 nM). Induces reversion of ras transformed cells to normal morphology [1]. Trichostatin A induces dedifferentiation of primordial germ cells into embryonic germ cells [2]. Cell permeable and active in vivo [3]. Decreased global chromatin condensation increasing gene-editing efficiency 2-4X [4]. Part of the CRISPY mix for increasing precise gene editing [5].

References:

1) Yoshida et al. (1990), Potent and specific inhibition of mammalian histone deacetylase both in vivo and in vitro by trichostatin A ; J. Biol. Chem., 265 17174

2) Futamura et al. (1995), Trichostatin A inhibits both ras-induced neurite outgrowth of PC12 cells and morphological transformation of NIH3T3 cells; Oncogene, 10 1119

3) Durcova-Hills et al. (2008), Reprogramming Primordial Germ Cells into Pluripotent Stem Cells; PLoS-One, 3 e3531

4) Molugu et al. (2023), Trichostatin A for Efficient CRISPR-Cas9 Gene Editing of Human Pluripotent Stem Cells; CRISPR J., 6 473

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5) Riesenberg and Maricic (2018), Targeting repair pathways with small molecules increases precise genome editing in pluripotent stem cells; Nat. Commun., 9 2165

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