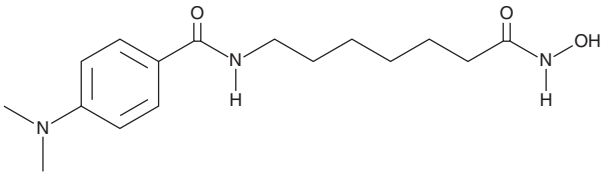
PRODUCT INFORMATION

M 344

Item No. 13174

CAS Registry No.:	251456-60-7
Formal Name:	4-(dimethylamino)-N-[7-(hydroxyamino)-7-oxoheptyl]-benzamide
Synonyms:	D237, Histone Deacetylase Inhibitor III, MS 344
MF:	$C_{16}H_{25}N_3O_3$
FW:	307.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 301 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

M 344 is supplied as a crystalline solid. A stock solution may be made by dissolving the M 344 in the solvent of choice, which should be purged with an inert gas. M 344 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of M 344 in these solvents is approximately 3, 25, and 30 mg/ml, respectively.

Description

M 344 is an inhibitor of histone deacetylases (HDACs), inhibiting maize HDAC (IC_{50} = 100 nM)[1] as well as human HDAC1 (IC_{50} = 46 nM).[2] It shows a three-fold selectivity for inhibition of HDAC6 over HDAC1 (IC_{50}s = 88 and 249 nM, respectively).[3] M 344 enhances the sensitivity of human squamous carcinoma cells to radiation[4] and promotes cell cycle arrest and apoptosis in human endometrial cancer and ovarian cancer cells (ED_{50} = 2.3 µM).[5]

References

1. Jung, M., Brosch, G., Kölle, D., *et al.* Amide analogues of trichostatin A as inhibitors of histone deacetylase and inducers of terminal cell differentiation. *J. Med. Chem.* **42(22)**, 4669-4679 (1999).
2. Remiszewski, S.W., Sambucetti, L.C., Atadja, P., *et al.* Inhibitors of human histone deacetylase: Synthesis and enzyme and cellular activity of straight chain hydroxamates. *J. Med. Chem.* **45(4)**, 753-757 (2002).
3. Heltweg, B., Dequiedt, F., Marshall, B.L., *et al.* Subtype selective substrates for histone deacetylases. *J. Med Chem.* **47(21)**, 5235-5243 (2004).
4. Zhang, Y., Jung, M., Dritschilo, A., *et al.* Enhancement of radiation sensitivity of human squamous carcinoma cells by histone deacetylase inhibitors. *Radiat. Res.* **161(6)**, 667-674 (2004).
5. Takai, N., Ueda, T., Nishida, M., *et al.* M344 is a novel synthesized histone deacetylase inhibitor that induces growth inhibition, cell cycle arrest, and apoptosis in human endometrial cancer and ovarian cancer cells. *Gynecol. Oncol.* **101(1)**, 108-113 (2006).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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