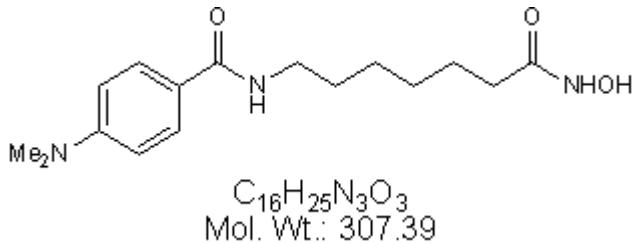


**Certificate of Analysis**[www.tocris.com](http://www.tocris.com)**Product Name:** M 344**Catalog No.:** 2771**Batch No.:** 1

CAS Number: 251456-60-7

IUPAC Name: 4-(Diethylamino)-N-[7-(hydroxyamino)-7-oxoheptyl]benzamide

**1. PHYSICAL AND CHEMICAL PROPERTIES****Batch Molecular Formula:** C<sub>16</sub>H<sub>25</sub>N<sub>3</sub>O<sub>3</sub>·½H<sub>2</sub>O**Batch Molecular Weight:** 311.89**Physical Appearance:** White solid**Solubility:** DMSO to 100 mM  
ethanol to 20 mM**Storage:** Store at RT**Batch Molecular Structure:****2. ANALYTICAL DATA****TLC:** R<sub>f</sub> = 0.1 (Ethyl acetate)**HPLC:** Shows 98.1% purity**<sup>1</sup>H NMR:** Consistent with structure**Mass Spectrum:** Consistent with structure**Microanalysis:** Carbon Hydrogen Nitrogen

Theoretical 61.62 8.24 13.47

Found 61.99 8.2 13.6

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**bio-technne.com**

info@bio-technne.com

techsupport@bio-technne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-technne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**[www.tocris.com/distributors](http://www.tocris.com/distributors)

Tel: +1 612 379 2956

**Product Name:** M 344

**Catalog No.:** 2771

**Batch No.:** 1

**CAS Number:** 251456-60-7

**IUPAC Name:** 4-(Diethylamino)-N-[7-(hydroxyamino)-7-oxoheptyl]benzamide

**Description:**

Histone deacetylase inhibitor ( $IC_{50} = 100$  nM). Induces terminal cell differentiation and causes an increase in hyperacetylated histone H4. Antiproliferative agent; suppresses the growth of human endometrial and ovarian cancer cells by inducing cell cycle arrest and apoptosis.

**Physical and Chemical Properties:**

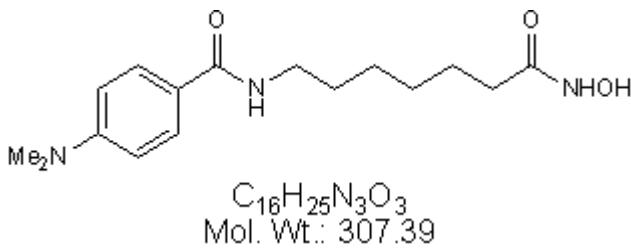
Batch Molecular Formula:  $C_{16}H_{25}N_3O_3 \cdot \frac{1}{2}H_2O$

Batch Molecular Weight: 311.89

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 100 mM  
ethanol to 20 mM

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Jung** *et al* (1999) Amide analogues of trichostatin A as inhibitors of histone deacetylase and inducers of terminal cell differentiation. *J.Med.Chem.* **42** 4669. PMID: 10579829.

**Takai** *et al* (2006) 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** 108. PMID: 16263156.

**Riessland** *et al* (2006) The benzamide M344, a novel histone deacetylase inhibitor, significantly increases SMN2 RNA/protein levels in spinal muscular atrophy cells. *Hum.Genet.* **120** 101. PMID: 16724231.

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**bio-techne.com**

info@bio-techne.com  
techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com  
Tel: +86 (21) 52380373

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Tel: +1 612 379 2956