TOCRIS
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Print Date: Jan 15th 2016

Certificate of Analysis

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Product Name: **TC-H 106** **Catalog No.: 4270** **Batch No.: 1**

CAS Number: 937039-45-7

IUPAC Name: *N1*-(2-Aminophenyl)-*N7*-(4-methylphenyl)heptanediamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{20}H_{25}N_3O_2$

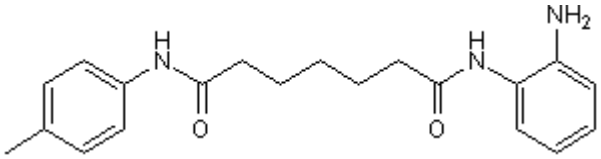
Batch Molecular Weight: 339.43

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM
ethanol to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.25 (Dichloromethane:Methanol [95:5])

HPLC: Shows 99.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	70.77	7.42	12.38
Found	70.59	7.4	12.42

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Description:

Class I histone deacetylase (HDAC) inhibitor (IC_{50} values are 150, 370, 760 and 5000 nM for HDAC1, HDAC3, HDAC2 and HDAC8 respectively). Exhibits slow, tight-binding inhibitory activity. Displays no activity against class II HDACs. Brain penetrant.

Physical and Chemical Properties:

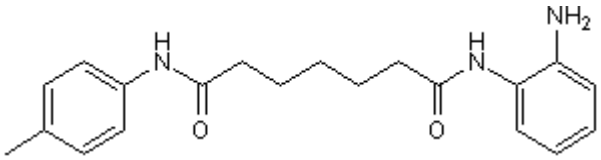
Batch Molecular Formula: $C_{20}H_{25}N_3O_2$

Batch Molecular Weight: 339.43

Physical Appearance: Off-white solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 50 mM

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:

Chou *et al* (2008) Pimelic diphenylamide 106 is a slow, tight-binding inhibitor of class I histone deacetylases. J.Biol.Chem. ***283*** 35402. PMID: 18953021.

Rai *et al* (2008) HDAC inhibitors correct frataxin deficiency in a Friedreich ataxia mouse model. PLoS ONE ***3*** e1958. PMID: 18463734.

Xu *et al* (2009) Chemical probes identify a role for histone deacetylase 3 in Friedrich's ataxia gene silencing. Chem.Biol. ***16*** 980. PMID: 19778726.

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