Print Date: May 30th 2018

Certificate of Analysis

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Product Name: **Apicidin** **Catalog No.: 4846** **Batch No.: 2**

CAS Number: 183506-66-3

IUPAC Name: Cyclo[(2*S*)-2-Amino-8-oxodecanoyl-1-methoxy-L-tryptophyl-L-isoleucyl-(2*R*)-2-piperidinecarbonyl]

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{34}H_{49}N_5O_6$

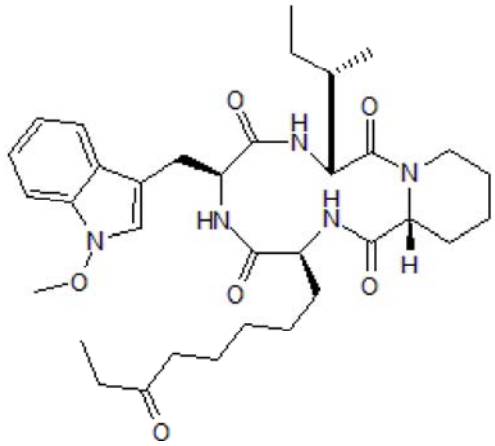
Batch Molecular Weight: 623.78

Physical Appearance: White solid

Solubility: DMSO to 2 mM
ethanol to 2 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity

Mass Spectrum: Consistent with structure

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Description:

Potent histone deacetylase (HDAC) inhibitor (IC_{50} = 0.7 nM in an enzyme activity assay). Antiangiogenic and anti-invasive; blocks proliferation of human stomach and breast cancer cells. Induces apoptosis and autophagy in human oral squamous carcinoma cells.

Physical and Chemical Properties:

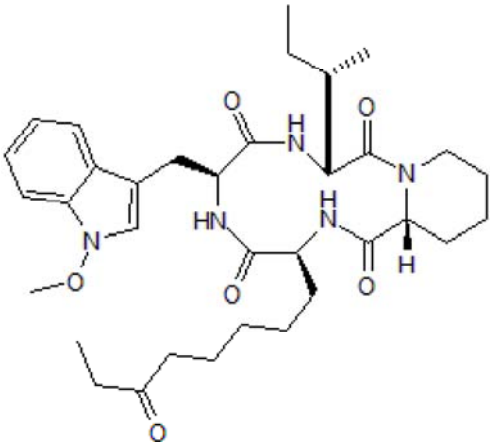
Batch Molecular Formula: $C_{34}H_{49}N_5O_6$

Batch Molecular Weight: 623.78

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 2 mM
ethanol to 2 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:

Ahn *et al* (2011) Apicidin, a histone deaceylase inhibitor, induces both apoptosis and autophagy in human oral squamous carcinoma cells. Oral Oncol. ***47*** 1032. PMID: 21856210.

Kim *et al* (2004) Apicidin is a histone deacetylase inhibitor with anti-invasive and anti-angiogenic potentials. Biochem.Biophys.Res.Comm. ***19*** 964. PMID: 14985106.

Han *et al* (2000) Apicidin, a histone deacetylase inhibitor, inhibits proliferation of tumor cells via induction of p21WAF1/Cip1 and gelsolin. Cancer Res. ***60*** 6068. PMID: 11085529.

Darkin-Rattray *et al* (1996) Apicidin: a novel antiprotozoal agent that inhibits parasite histone deacetylase. Proc.Natl.Acad.Sci. ***93*** 13143. PMID: 8917558.