



LKT Laboratories, Inc.

Apicidin

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## Product Information

Product ID A6132

CAS No. 183506-66-3

Chemical Name

Synonym

Formula  $C_{34}H_{49}N_5O_6$

Formula Wt. 623.78

Melting Point 190° C

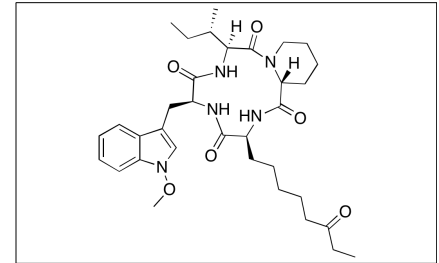
Purity ≥98%

Solubility Ethano (0.9 mg/mL), DMSO  
(0.9 mg/mL),  
Dichloromethane.  
Slightly soluble in water,  
methanol

Store Temp 4° C

Ship Temp Ambient

**Description** Apicidin is a cyclic tetrapeptide that inhibits histone deacetylase (HDAC) and exhibits anticancer benefit. In oral squamous cell carcinoma cells, apicidin upregulates expression of p21, inducing G2/M phase cell cycle arrest, apoptosis, and autophagy. In non-small cell lung cancer (NSCLC) cells, apicidin downregulates expression of checkpoint kinase (CHK) 1, decreases phosphorylation of cdc25C and cdc2, and upregulates expression of cdc25A, inducing apoptotic cell death. Additionally, apicidin increases apoptosis in Bcr-Abl positive leukemia cells through disruption of the mitochondrial membrane potential, activation of caspases 3, 8, and 9, cleavage of poly(ADP)-ribose polymerase (PARP), and release of cytochrome c. Apicidin also induces apoptosis in eosinophils and neutrophils.



**Bulk quantities available upon request**

Product ID	Size
A6132	1 mg
A6132	5 mg
A6132	10 mg

**References** Ahn MY, Ahn SG, Yoon JH. Apicidin, a histone deacetylase inhibitor, induces both apoptosis and autophagy in human oral squamous carcinoma cells. *Oral Oncol.* 2011 Nov;47(11):1032-8. PMID: 21856210.

Brazelle W, Kreaehling JM, Gemmer J, et al. Histone deacetylase inhibitors downregulate checkpoint kinase 1 expression to induce cell death in non-small cell lung cancer cells. *PLoS One.* 2010 Dec 14;5(12):e14335. PMID: 21179472.

Kankaanranta H, Janka-Junttila M, Ilmarinen-Salo P, et al. Histone deacetylase inhibitors induce apoptosis in human eosinophils and neutrophils. *J Inflamm (Lond).* 2010 Feb 4;7:9. PMID: 20181093.

Cheong JW, Chong SY, Kim JY, et al. Induction of apoptosis by apicidin, a histone deacetylase inhibitor, via the activation of mitochondria-dependent caspase cascades in human Bcr-Abl-positive leukemia cells. *Clin Cancer Res.* 2003 Oct 15;9(13):5018-27. PMID: 14581377.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.