

Store at
-20°C

Apicidin

#90826

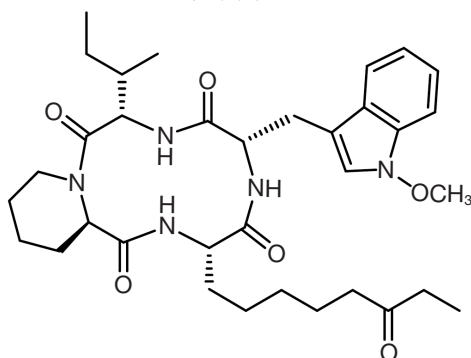
1 mg

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New 05/20

For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Apicidin is a fungal metabolite, broad-spectrum antiprotozoal agent. This small molecule inhibits histone deacetylases (HDACs), known to moderate histone acetylation and chromatin folding during gene expression (1,2). Apicidin has been shown to irreversibly prevent the development of intracellular Apicomplexan parasites *in vitro* through HDAC inhibition ($IC_{50} = 0.7$ nM) (1). Research indicates that Apicidin inhibits tumor cell proliferation through gene expression changes of p21WAF1/Cip1 and gelsolin, and can cause cell cycle arrest in the G1 phase (2). Apicidin also decreases HIF-1 α protein levels in human and mouse cell lines (3). HDAC2 has been recognized as a host immune response to the influenza A virus and several other viruses, making HDAC inhibitors important compounds to study in relation to viral diseases (4,5).

Molecular Formula: C₃₄H₄₉N₅O₆**Molecular Weight:** 623.8 g/mol**Purity:** >98%**CAS:** 183506-66-3**Solubility:** Soluble in DMSO at 10 mg/ml or ethanol at 1 mg/ml.

Storage: Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 3 months to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use: Apicidin is supplied as a lyophilized powder. For a 2 mM stock, reconstitute 1 mg of powder in 801 μ l of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References:

- (1) Darkin-Rattray, S.J. et al. (1996) *Proc Natl Acad Sci U S A* 93, 13143-7.
- (2) Han, J.W. et al. (2000) *Cancer Res* 60, 6068-74.
- (3) Kim, S.H. et al. (2007) *Oncol Rep* 17, 647-51.
- (4) Nagesh, P.T. et al. (2017) *Front Microbiol* 8, 1315.
- (5) Walters, M.S. et al. (2009) *J Virol* 83, 11502-13.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.