

PRODUCT INFORMATION



Dimethylamino-Micheliolide

Item No. 25499

CAS Registry No.: 1403357-81-2
Formal Name: (3R,3aS,9R,9aS,9bS)-3-[(dimethylamino)methyl]-3a,4,5,7,8,9,9a,9b-octahydro-9-hydroxy-6,9-dimethyl-azuleno[4,5-b]furan-2(3H)-one

Synonyms: ACT001, DMAMCL, Dimethylaminomicheliolide

MF: C₁₇H₂₇NO₃

FW: 293.4

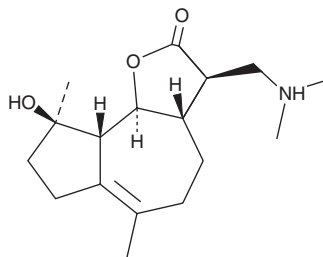
Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Dimethylamino-micheliolide (DMAMCL) is supplied as a solid. A stock solution may be made by dissolving the DMAMCL in the solvent of choice, which should be purged with an inert gas. DMAMCL is soluble in methanol.

Description

DMAMCL is a prodrug form of the sesquiterpene lactone micheliolide (Item No. 25402).¹ It inhibits migration and invasion of, and vascular formation by, U-118 MG glioma cells when used at a concentration of 10 μM. DMAMCL enhances cell death induced by the DNA-cross-linking agent cisplatin (Item No. 13119) in U-118 MG cells. *In vivo*, DMAMCL (200 mg/kg) reduces tumor volume and slows the tumor growth rate in a U-118 MG mouse xenograft model when administered in combination with cisplatin. It also prevents proteinuria and renal failure in a *db/db* mouse model of diabetic nephropathy.²

References

1. Xi, X., Liu, N., Wang, Q., *et al.* ACT001, a novel PAI-1 inhibitor, exerts synergistic effects in combination with cisplatin by inhibiting PI3K/AKT pathway in glioma. *Cell Death Dis.* **10**(10), 757 (2019).
2. Liu, W., Chen, X., Wang, Y., *et al.* Micheliolide ameliorates diabetic kidney disease by inhibiting Mtdh-mediated renal inflammation in type 2 diabetic *db/db* mice. *Pharmacol. Res.* **150**, 104506 (2019).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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