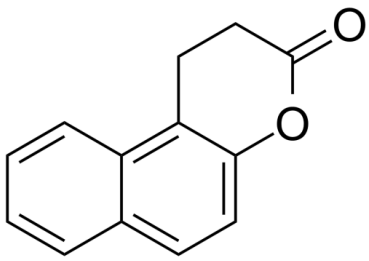
Data Sheet

Product Name:	Splitomicin
Cat. No.:	CS-0019737
CAS No.:	5690-03-9
Molecular Formula:	$C_{13}H_{10}O_2$
Molecular Weight:	198.22
Target:	HDAC
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Solubility:	DMSO : 100 mg/mL (504.49 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Splitomicin (Splitomycin) is a selective **Sir2p** inhibitor. Splitomicin inhibits NAD^+-dependent HDAC activity of Sir2 protein. Splitomicin induces dose-dependent inhibition of HDAC in the yeast extract with an **IC_{50}** of 60 μM[1]. **In Vitro:** Splitomicin (10-333 μM; 24 hours) elicits antiproliferative effects in MCF-7 and H1299 cells in a dose-dependent manner in colony formation assay. Splitomicin (33 μM) fails to decrease the number of colonies, but Splitomicin (100 and 333 μM) effectively inhibits colony formation in MCF-7 and H1299 cells[2]. **In Vivo:** Splitomicin (80 mg/kg with an intraperitoneal injection every 24 h for 5 days, in mice) enhances tissue factor (TF) activity in the arterial vessel wall and accelerates carotid artery thrombus formation in a photochemical injury model[3].

References:

[1]. Bedalov A, et al. Identification of a small molecule inhibitor of Sir2p. Proc Natl Acad Sci U S A. 2001 Dec 18;98(26):15113-8.

[2]. Breitenstein A, et al. Sirt1 inhibition promotes in vivo arterial thrombosis and tissue factor expression in stimulated cells. Cardiovasc Res. 2011 Feb 1;89(2):464-72.

[3]. Ota H, et al. Sirt1 inhibitor, Sirtinol, induces senescence-like growth arrest with attenuated Ras-MAPK signaling in human cancer cells. Oncogene. 2006 Jan 12;25(2):176-85.

CAIndexNames:

3H-Naphtho[2,1-b]pyran-3-one, 1,2-dihydro-

SMILES:

O=C1CCC2=C3C=CC=CC3=CC=C2O1

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