

Silvestrol

Catalog No: tcsc0543



Available Sizes

Size: 1mg

Size: 2mg



Specifications

CAS No:

697235-38-4

Formula:

$C_{34}H_{38}O_{13}$

Pathway:

Cell Cycle/DNA Damage

Target:

Eukaryotic Initiation Factor (eIF)

Purity / Grade:

>98%

Solubility:

H₂O :

Alternative Names:

(-)-Silvestrol

Observed Molecular Weight:

654.66

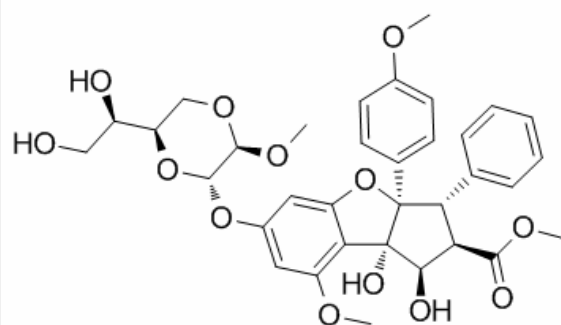
Product Description

Silvestrol is isolated from the fruits and twigs of *Aglaia foveolata*, and is a specific **eIF4A**-targeting translation inhibitor.

IC50 & Target: eIF4A^[1]

In Vitro: Silvestrol is a specific eIF4A-targeting translation inhibitor. Silvestrol exhibits significant cytotoxic activity against many human cancer cell lines, such as lung, prostate, and breast cancer with IC₅₀ values ranging from 1 to 7 nM^[1]. Silvestrol significantly reduces the number of LNCaP cell colonies. Silvestrol (30 nM, 120 nM) induces apoptosis in LNCaP cells, through the mitochondrial pathway. Apaf-1, Caspase-2, caspase-9, and caspase-10 are involved in Silvestrol-induced apoptosis but caspase-3 and 7 are not^[2]. Silvestrol (50 nM) exerts an immediate inhibitory effect and causes near-static cell index compared with the control cells. Silvestrol (6.25 nM) enhances proliferation more than the vehicle control-treated cells, whereas a higher concentration of Silvestrol (50 nM) can inhibit cell proliferation. Silvestrol and episilvestrol display synergistic effects in combination with cisplatin^[3]. Silvestrol induces caspase-3 activation and apoptotic cell death in a time- and dose-dependent manner. Silvestrol-mediated cell death is attenuated in ATG7-null mouse embryonic fibroblasts (MEFs) lacking a functional autophagy protein^[4].

In Vivo: Silvestrol (1.5 mg/kg, i.p.) does not adversely affect production of human IgG by xenografted B-lymphocytes in mice. Silvestrol significantly prolongs survival compared to vehicle. There is no such lymphocyte infiltration detected in the spleens of any of the Silvestrol-treated mice, and nor do these animals exhibit any other obvious signs of lymphoma upon necropsy^[5].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!