Web: www.taiclone.com
Tel: +886-2-2735-9682
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(R) - (-) -Gossypol acetic acid

Catalog No: tcsc3859

Available Sizes

Size: 10mg

Size: 50mg

Specifications

CAS No:
866541-93-7

Formula:
$C_{32}H_{34}O_{10}$

Pathway:
Autophagy;Apoptosis

Target:
Autophagy;Bcl-2 Family

Purity / Grade:
>98%

Solubility:
DMSO : 39.33 mg/mL (67.97 mM; Need ultrasonic and warming)

Alternative Names:
AT-101 (acetic acid);(-)-Gossypol acetic acid;(R)-Gossypol acetic acid

Observed Molecular Weight:
578.61

Product Description

(R)-(-)-Gossypol acetic acid (AT-101 (acetic acid)) is the levorotatory isomer of a natural product Gossypol. AT-101 is determined to bind to **Bcl-2**, **Mcl-1** and **Bcl-xL** proteins with **K_i**s of 260±30 nM, 170±10 nM, and 480±40 nM, respectively.

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IC50 & Target: Ki: 170±10 nM (Mcl-1), 260±30 nM (Bcl-2), 480±40 nM (Bcl-xL)[2]

In Vitro: The natural racemic Gossypol has two enantiomers, namely the (R)-(-)-Gossypol acetic acid (AT-101 (acetic acid)) and (+)-Gossypol enantiomers. (R)-(-)-Gossypol (AT-101) and (+)-Gossypol binds to Bcl-2 or Bcl-xL with similar binding affinities, AT-101 is more potent than (+)-Gossypol in inhibition of cell growth and induction of apoptosis, possibly due to the influence of serum in the cell culture experiments. The racemic form and each of the enantiomers of Gossypol are tested against UM-SCC-6 and UM-SCC-14A in 6-day MTT assays. (R)-(-)-Gossypol (AT-101) exhibits greater growth inhibition relative to (±)-Gossypol than (+)-Gossypol in both cell lines tested (P50 of 2-5 μM and a less sensitive group with IC_{50} clusters around 10 μM[1]. (R)-(-)-Gossypol (AT-101) is determined to bind to Bcl-2, Mcl-1 and Bcl-xL proteins with K_i values of 260±30 nM, 170±10 nM, and 480±40 nM, respectively[2].