

(R) - (-) -Gossypol

Catalog No: tcsc0966



Available Sizes

Size: 10mg

Size: 50mg



Specifications

CAS No:

90141-22-3

Formula:

$C_{30}H_{30}O_8$

Pathway:

Autophagy;Apoptosis

Target:

Autophagy;Bcl-2 Family

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Alternative Names:

AT-101;R-(-)-gossypol acetic acid

Observed Molecular Weight:

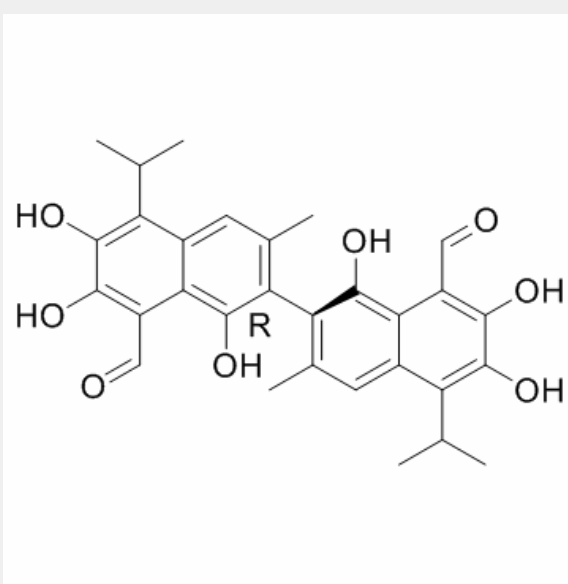
518.55

Product Description

(R)-(-)-Gossypol (AT-101) 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.

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 (AT-101) 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. 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 IC₅₀ 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].



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