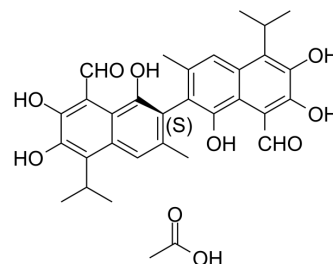


(S)-Gossypol (acetic acid)

Cat. No.:	HY-15464D
CAS No.:	1189561-66-7
Molecular Formula:	C ₃₂ H ₃₄ O ₁₀
Molecular Weight:	578.61
Target:	Bcl-2 Family
Pathway:	Apoptosis
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (86.41 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent \ Mass \ Concentration	1 mg	5 mg	10 mg
		1 mM	1.7283 mL	8.6414 mL	17.2828 mL
		5 mM	0.3457 mL	1.7283 mL	3.4566 mL
	10 mM	0.1728 mL	0.8641 mL	1.7283 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.32 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	(S)-Gossypol is the isomer of a natural product Gossypol. (S)-Gossypol binds to the BH3-binding groove of Bcl-xL and Bcl-2 proteins with high affinity.	
IC₅₀ & Target	Bcl-2	Bcl-xL
In Vitro	The natural racemic Gossypol has two enantiomers, namely the (-)-Gossypol and (S)-Gossypol ((+)-Gossypol) enantiomers. (+)-Gossypol and (-)-Gossypol binds to Bcl-2 or Bcl-xL with similar binding affinities. (-)-Gossypol is more potent than (+)-Gossypol in inhibition of cell growth and induction of apoptosis. 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. (-)-Gossypol exhibits greater growth inhibition relative to (±)-Gossypol than (+)-Gossypol in both cell lines tested (P<0.001). An intermediate growth inhibitory effect is observed with (±)-Gossypol but this effect is only observed at the higher dose of Gossypol (10 μM, P<0.0001) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

PROTOCOL

Cell Assay

Two representative UM-SCC cell lines, UM-SCC-6 and UM-SCC-14A, are continuously exposed to 0 (vehicle control), 5 or 10 μ M (\pm)-Gossypol, (-)-Gossypol or (S)-Gossypol ((+)-Gossypol) in a 6-day MTT cell survival assay^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Patent. US20220162561A1.

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REFERENCES

[1]. Oliver CL, et al. In vitro effects of the BH3 mimetic, (-)-Gossypol, on head and neck squamous cell carcinoma cells. Clin Cancer Res. 2004 Nov 15;10(22):7757-63.

Caution: Product has not been fully validated for medical applications. For research use only.

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