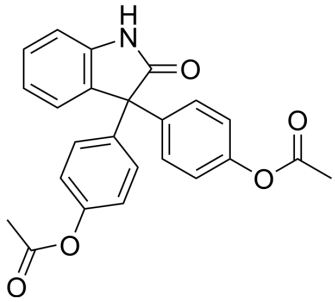
Oxyphenisatin acetate

Cat. No.:	HY-101714		
CAS No.:	115-33-3		
Molecular Formula:	$C_{24}H_{19}NO_5$		
Molecular Weight:	401.41		
Target:	Autophagy		
Pathway:	Autophagy		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (62.28 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4912 mL	12.4561 mL	24.9122 mL
	5 mM	0.4982 mL	2.4912 mL	4.9824 mL
	10 mM	0.2491 mL	1.2456 mL	2.4912 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 (6.23 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.18 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (2.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Oxyphenisatin acetate, the pro-agent of oxyphenisatin, is used to be a laxative.

In Vitro

Oxyphenisatin acetate inhibits the growth of the breast cancer cell lines MCF7, T47D, HS578T, and MDA-MB-468. In the estrogen receptor (ER) positive MCF7 and T47D cells, oxyphenisatin acetate induces TNFα expression and TNFR1 degradation, indicating autocrine receptor-mediated apoptosis in these lines. Ten micromoles per liter Oxyphenisatin acetate treatment results in autophagy and mitochondrial dysfunction[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	Oxyphenisatin acetate (300 mg/kg, i.p.) delivers intraperitoneally inhibited tumor growth, accompanied by phosphorylation of eIF2α and degradation of TNFR1 in an MCF7 xenograft model[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Assessment in several other tumor models demonstrates tolerability with oxyphenisatin acetate at 300 mg/kg given once daily or 200 mg/kg given twice daily. For the MCF-7 study treatments are administered on an exact body weight basis using dose volumes of 1-2 mL/kg body weight. The vehicle control receives 100% DMSO. The treated group receives 300 mg/kg oxyphenisatin acetate once daily for a total of 10 days, followed by a 3 day rest and an additional 6 days of dosing. The dose solutions are prepared in 100% DMSO, aliquoted and stored frozen until used. The mice are monitored for a total of 52 days with treatment initiation occurring on day 27 posttumor implantation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Morrison BL, et al. Oxyphenisatin acetate (NSC 59687) triggers a cell starvation response leading to autophagy, mitochondrial dysfunction, and autocrine TNFα-mediated apoptosis. Cancer Med. 2013 Oct;2(5):687-700.

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