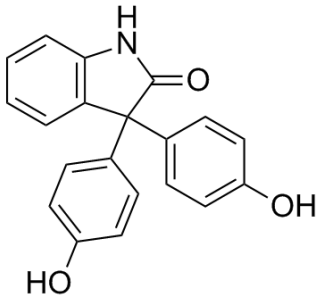
Oxyphenisatine

Cat. No.:	HY-B2102		
CAS No.:	125-13-3		
Molecular Formula:	$C_{20}H_{15}NO_3$		
Molecular Weight:	317.34		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (315.12 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1512 mL	15.7560 mL	31.5119 mL
	5 mM	0.6302 mL	3.1512 mL	6.3024 mL
	10 mM	0.3151 mL	1.5756 mL	3.1512 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 (7.88 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.88 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.88 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Oxyphenisatine (Oxyphenisatin) is a laxative. Oxyphenisatin acetate is the pro-drug of oxyphenisatin with anticancer activity.

In Vitro

Oxyphenisatin has been shown to have antiproliferative activity. Oxyphenisatin acetate (OXY, NSC 59687) is the pro-drug of oxyphenisatin. OXY inhibits the growth of the breast cancer cell lines MCF7, T47D, HS578T, and MDA-MB-468 (IC_{50}=0.8, 0.6, 2.1, 1.8 μM). This effect is associated with selective inhibition of translation accompanied by rapid phosphorylation of the

	nutrient sensing eIF2α kinases, GCN2 and PERK[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Toxicity studies demonstrate that mice tolerate IP administration of OXY at 300 mg/kg once daily or 200 mg/kg twice daily. Administration of OXY at 300 mg/kg IP once daily for 10 days results in significantly smaller tumors from day 33 to day 52[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice: When tumors reaches 120 mg, mice are randomized into treatment groups and therapy is initiated. Asimple toxicity assessment to determine tolerability to OXY is conducted by administering single intraperitoneal (IP) doses of compound at 100, 200, and 400 mg/kg. The mice were observed for adverse effects for 14 days postdose[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.

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

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