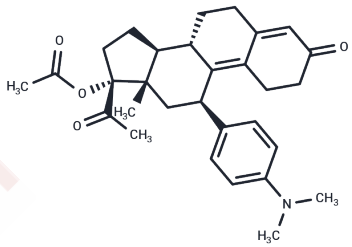
Data Sheet (Cat.No.T2527)

TargetMol

Ulipristal acetate

Chemical Properties



CAS No. : 126784-99-4

Formula: C30H37NO4

Molecular Weight: 475.62

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Ulipristal acetate (CDB-2914) is an orally bioavailable selective progesterone receptor modulator with anti-progesterone activity. It binds to the progesterone receptor (PR), inhibiting PR-mediated gene expression and interfering with progesterone activity in the reproductive system, potentially suppressing the growth of uterine leiomyomatosis. Additionally, ulipristal can be used as emergency contraception by inhibiting or delaying ovulation and affecting endometrial tissue.
Targets(IC50)	Estrogen/progestogen Receptor,Autophagy,Progesterone Receptor
In vitro	Ulipristal acetate blocks activin A modulation of fibronectin and vascular endothelial growth factor A (VEGF-A) mRNA expression in cultured myometrial and leiomyoma cells [2]. Ulipristal acetate decreases the DNA fragmentation at the 100-ng/mL dose and continuing up to the 10,000-ng/mL dose compared to those spermatozoa in the control group[3].
In vivo	Ulipristal and CDB-4124 exhibit notable antiprogestational effects in vivo[1]. Ulipristal acetate has been shown to reduce the occurrence of fibroadenomas and adenocarcinomas in the mammary glands across all groups studied. At the highest administered dose in rats, ulipristal acetate exposure [AUC(0-24h)] is 67 times the human therapeutic exposure at 10 mg/day. Importantly, in mice, ulipristal acetate does not lead to an increase in tumor formation, even at exposures up to 313 times the therapeutic level. Adverse effects in mice are confined to weight changes in specific organs (liver, pituitary, thyroid/parathyroid glands, and epididymis) and minimal panlobular hepatocellular hypertrophy at a dose of 130 mg/kg/day[4]. Additionally, ulipristal acetate at doses of 1 mg/kg and 5 mg/kg causes a dose-dependent increase in endometrial thickening, observed by pathologists more frequently than in controls. There is also a minor decrease in secretory differentiation as the dose of ulipristal acetate increases, indicated by reduced sub- and supra-nuclear vacuolation[5].

Solubility Information

Solubility	DMSO: 50 mg/mL (105.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1025 mL	10.5126 mL	21.0252 mL
5 mM	0.4205 mL	2.1025 mL	4.205 mL
10 mM	0.2103 mL	1.0513 mL	2.1025 mL
50 mM	0.0421 mL	0.2103 mL	0.4205 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Attardi BJ, et al. In vitro antiprogestational/antiglucocorticoid activity and progestin and glucocorticoid receptor binding of the putative metabolites and synthetic derivatives of CDB-2914, CDB-4124, and mifepristone. J Steroid Biochem Mol Biol. 2004 Ma

Ciarmela P, et al. Ulipristal acetate modulates the expression and functions of activin a in leiomyoma cells. Reprod Sci. 2014 Sep;21(9):1120-5.

Munuce MJ, et al. Effects of ulipristal acetate on sperm DNA fragmentation during in vitro incubation. Eur J Contracept Reprod Health Care. 2013 Oct;18(5):355-63.

Pohl O, et al. Carcinogenicity and chronic rodent toxicity of the selective progesterone receptor modulator ulipristal acetate. Curr Drug Saf. 2013 Apr;8(2):77-97.

Pohl O, et al. A 39-week oral toxicity study of ulipristal acetate in cynomolgus monkeys. Regul Toxicol Pharmacol. 2013 Jun;66(1):6-12.