(+)-Cloprostenol

Cat. No.: HY-107381

CAS No.: 54276-21-0

Molecular Formula: $C_{22}H_{29}ClO_6$

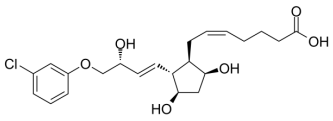
Molecular Weight: 424.92

Target: Prostaglandin Receptor

Pathway: GPCR/G Protein

Storage:

Pure form	-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 (235.34 mM; Need ultrasonic)
Ethanol : 50 mg/mL (117.67 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3534 mL	11.7669 mL	23.5338 mL
5 mM	0.4707 mL	2.3534 mL	4.7068 mL
10 mM	0.2353 mL	1.1767 mL	2.3534 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: 5 mg/mL (11.77 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (11.77 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (11.77 mM); Clear solution
4. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.88 mM); Clear solution
5. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.88 mM); Clear solution
6. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.88 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	(+)-Cloprostenol is a prostaglandin F2α (PGF2α) analogue, and shows selective agonistic activity at the prostaglandin receptor.
IC_{50} & Target	$PGF_{2\alpha}$
In Vitro	D-Cloprostenol and PGF2 alpha are equipotent, about 150 times more potent than dl-cloprostenol ($P < 0.05$) and approximately 280 times more potent than PGE1 in inhibiting [^{3}H]PGF2 alpha binding to corpus luteum cell membranes. However, d-cloprostenol and PGF2 alpha are about 10 times more potent than dl-cloprostenol and approximately 95 times more potent than PGE1 in myometrial cell membranes[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	D-cloprostenol (15 g per head) is the lowest dose that consistently achieves abortion; D-cloprostenol causes mild adverse effects including salivation, defecation and hyperventilation in bitches weighing less than 10 kg. Intra-vesicle administration of a single low dose of d-cloprostenol is a safe and successful technique to induce abortion in the bitch[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Manca R, et al. Intra-vesicle administration of D-cloprostenol for induction of abortion in mid-gestation bitches. Anim Reprod Sci. 2008 Jun;106(1-2):133-42. Epub 2007 Apr 21.

[2]. Re G, et al. Specific binding of dl-cloprostenol and d-cloprostenol to PGF2 alpha receptors in bovine corpus luteum and myometrial cell membranes. J Vet Pharmacol Ther. 1994 Dec;17(6):455-8.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA