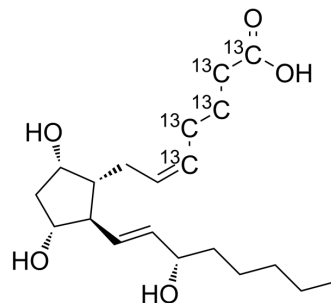


Dinoprost-¹³C₅

Cat. No.:	HY-12956S2
Molecular Formula:	C ₁₅ ¹³ C ₅ H ₂₇ O ₅
Molecular Weight:	352.39
Target:	Prostaglandin Receptor; Endogenous Metabolite; Autophagy; Apoptosis; Isotope-Labeled Compounds
Pathway:	GPCR/G Protein; Metabolic Enzyme/Protease; Autophagy; Apoptosis; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Dinoprost- ¹³ C ₅ is ¹³ C labeled Dinoprost (HY-12956). Dinoprost (Prostaglandin F _{2α}) is an orally active, potent prostaglandin F (PGF) receptor (FP receptor) agonist. Dinoprost is a luteolytic hormone produced locally in the endometrial luminal epithelium and corpus luteum (CL). Dinoprost plays a key role in the onset and progression of labour ^{[1][2]} .
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . Dinoprost (Prostaglandin F _{2α} ; 1 μM; for 24 hours) induces ER stress, autophagy, and apoptosis in goat luteal cells ^[2] . ?Dinoprost (1 μM; for 24 hours) significantly increases the expression of GRP78 and UPR sensors ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Hagen Thieme, et al. Endothelin antagonism: effects of FP receptor agonists prostaglandin F_{2α} and fluprostenol on trabecular meshwork contractility. Invest Ophthalmol Vis Sci. 2006 Mar;47(3):938-45.
- [2]. Xin Wen, et al. Prostaglandin F_{2α} Induces Goat Corpus Luteum Regression via Endoplasmic Reticulum Stress and Autophagy. Front Physiol. 2020 Sep 11;11:868.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

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

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