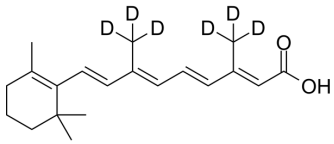
Retinoic acid-d6

Cat. No.:	HY-14649S3
CAS No.:	2483831-72-5
Molecular Formula:	$C_{20}H_{22}D_6O_2$
Molecular Weight:	306.47
Target:	RAR/RXR; PPAR; Autophagy; Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor; Cell Cycle/DNA Damage; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Retinoic acid-d_6 is the deuterium labeled Retinoic acid[1]. Retinoic acid is a metabolite of vitamin A that plays important roles in cell growth, differentiation, and organogenesis. Retinoic acid is a natural agonist of RAR nuclear receptors, with IC50s of 14 nM for RARα/β/γ. Retinoic acid bind to PPARβ/δ with Kd of 17 nM. Retinoic acid acts as an inhibitor of transcription factor Nrf2 through activation of retinoic acid receptor alpha[2][3][4][5][6][7].
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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

[2]. Wu L, et al. Retinoid X Receptor Agonists Upregulate Genes Responsible for the Biosynthesis of All-Trans-Retinoic Acid in Human Epidermis. PLoS One. 2016 Apr 14;11(4):e0153556.;

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