Clofibrate-d4

Cat. No.: HY-B0287S

CAS No.: 1189654-03-2

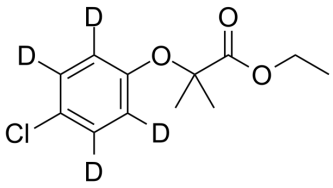
Molecular Formula: $C_{12}H_{11}D_4ClO_3$

Molecular Weight: 246.72

Target: PPAR

Pathway: Cell Cycle/DNA Damage

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Clofibrate-d4 is the deuterium labeled Clofibrate. Clofibrate is an agonist of PPAR, with EC_{50}s of 50 μM, -500 μM for murine PPARα and PPARγ, and 55 μM, -500 μM for human PPARα and PPARγ, respectively.
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;53(2):211-216.

[2]. Willson TM, et al. The PPARs: from orphan receptors to drug discovery. J Med Chem. 2000 Feb 24;43(4):527-50.

[3]. Chen Y, et al. Clofibrate Attenuates ROS Production by Lipid Overload in Cultured Rat Hepatoma Cells. J Pharm Pharm Sci. 2017;20(0):239-251.

[4]. Chen SH, et al. Prenatal PPARα activation by clofibrate increases subcutaneous fat browning in male C57BL/6J mice fed a high-fat diet during adulthood. PLoS One. 2017 Nov 2;12(11):e0187507.

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