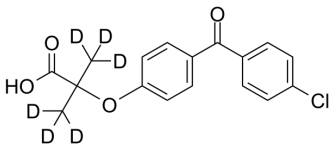
Fenofibric acid-d6

Cat. No.:	HY-B0760S
CAS No.:	1092484-69-9
Molecular Formula:	$C_{17}H_9D_6ClO_4$
Molecular Weight:	324.79
Target:	PPAR; COX
Pathway:	Cell Cycle/DNA Damage; Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fenofibric acid-d6 (FNF acid-d6) is the deuterium labeled Fenofibric acid. Fenofibric acid, an active metabolite of fenofibrate, is a PPAR activitor, with EC_{50}s of 22.4 μM, 1.47 μM, and 1.06 μM for PPARα, PPARγ and PPARδ, respectively; Fenofibric acid also inhibits COX-2 enzyme activity, with an IC_{50} of 48 nM.
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]. Dietz M, et al. Comparative molecular profiling of the PPARα/γ activator aleglitazar: PPAR selectivity, activity and interaction with cofactors. ChemMedChem. 2012 Jun;7(6):1101-11.

[3]. Prasad GS, et al. Anti-inflammatory activity of anti-hyperlipidemic drug, fenofibrate, and its phase-I metabolite fenofibric acid: in silico, in vitro, and in vivo studies. Inflammopharmacology. 2017 Dec 13.

[4]. Neumeier M, et al. Aldehyde oxidase 1 is highly abundant in hepatic steatosis and is downregulated by adiponectin and fenofibric acid in hepatocytes in vitro. Biochem Biophys Res Commun. 2006 Nov 24;350(3):731-5. Epub 2006 Sep 27.

[5]. Miranda S, et al. Beneficial effects of fenofibrate in retinal pigment epithelium by the modulation of stress and survival signaling under diabetic conditions. J Cell Physiol. 2012 Jun;227(6):2352-62.

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