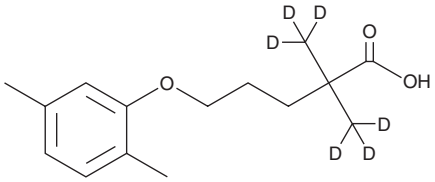
PRODUCT INFORMATION

Gemfibrozil-d_6

Item No. 31915

CAS Registry No.: 1184986-45-5
Formal Name: 5-(2,5-dimethylphenoxy)-2,2-di(methyl-d_3)-pentanoic acid
Synonym: CI-719-d_6
MF: $C_{15}H_{16}D_6O_3$
FW: 256.4
Chemical Purity: ≥98% (Gemfibrozil)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_6); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Gemfibrozil-d_6 is intended for use as an internal standard for the quantification of gemfibrozil (Item No. 14835) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Gemfibrozil-d_6 is supplied as a solid. A stock solution may be made by dissolving the gemfibrozil-d_6 in the solvent of choice, which should be purged with an inert gas. Gemfibrozil-d_6 is soluble in methanol and DMSO.

Description

Gemfibrozil is a peroxisome proliferator-activated receptor α (PPARα) and PPARγ agonist (EC_{50}s = 193.3 and 147.8 µM, respectively, in transactivation assays).[1] *In vivo*, gemfibrozil (50 mg/kg, p.o.) reduces serum total cholesterol, triglyceride, and LDL levels in a rat model of high-cholesterol diet-induced hyperlipidemia.[2] Gemfibrozil (100 mg/kg per day) reduces atherosclerotic plaque area, superoxide production, and expression of the genes encoding the NF-κB subunit p65 and chemokine (C-C) motif ligand 2 (CCL2) in *ApoE*$^{-/-}$ mice.[3] Formulations containing gemfibrozil have been used in the treatment of high cholesterol.

References

1. Kim, N.J., Lee, K.O., Koo, B.W., *et al.* Design, synthesis, and structure-activity relationship of carbamate-tethered aryl propanoic acids as novel PPARα/γ dual agonists. *Bioorg. Med. Chem. Lett.* **17(13)**, 3595-3598 (2007).
2. Solanki, Y.B. and Jain, S.M. Antihyperlipidemic activity of *Clitoria ternatea* and *Vigna mungo* in rats. *Pharm. Biol.* **48(8)**, 915-923 (2010).
3. Calkin, A.C., Cooper, M.E., Jandeleit-Dahm, K.A., *et al.* Gemfibrozil decreases atherosclerosis in experimental diabetes in association with a reduction in oxidative stress and inflammation. *Diabetologia* **49(4)**, 766-774 (2006).

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