



# SZABO SCANDIC

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## Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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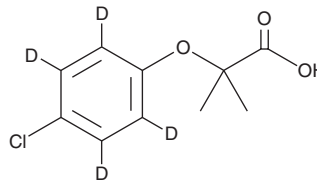
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# PRODUCT INFORMATION



## Clofibric Acid-d<sub>4</sub> Item No. 33612

**CAS Registry No.:** 1184991-14-7  
**Formal Name:** 2-(4-chlorophenoxy-d<sub>4</sub>)-2-methylpropanoic acid  
**MF:** C<sub>10</sub>H<sub>7</sub>ClD<sub>4</sub>O<sub>3</sub>  
**FW:** 218.7  
**Chemical Purity:** ≥98% (Clofibric Acid)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Clofibric acid-d<sub>4</sub> is intended for use as an internal standard for the quantification of clofibric acid (Item No. 21608) 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).

Clofibric acid-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the clofibric acid-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Clofibric acid-d<sub>4</sub> is soluble in methanol, DMSO, and acetonitrile.

### Description

Clofibric acid is a peroxisome proliferator-activated receptor  $\alpha$  (PPAR $\alpha$ ) agonist (EC<sub>50</sub> = 50  $\mu$ M in a transactivation assay) and the active metabolite of clofibrate (Item No. 10956).<sup>1</sup> It is formed from clofibrate by tissue and serum esterases.<sup>2</sup> Dietary administration of clofibric acid (0.067-0.22%) reduces serum cholesterol, phospholipid, and triglyceride levels in rats.<sup>3</sup> It decreases glutamate oxaloacetate transaminase (GOT) levels and increases glutamate pyruvate transaminase (GPT) and lactate dehydrogenase (LDH) levels, markers of xenobiotic stress, in the plasma of carp (*C. carpio*) when administered in tank water at a concentration of 10  $\mu$ g/L.<sup>4</sup> Clofibric acid has been found in wastewater effluent.<sup>5</sup>

### References

1. Giampietro, L., Laghezza, A., Cerchia, C., *et al.* Novel phenyldiazenyl fibrates analogues as PPAR  $\alpha/\gamma/\delta$  pan-agonists for the amelioration of metabolic syndrome. *ACS Med. Chem. Lett.* **10(4)**, 545-551 (2019).
2. Cayen, M.N. Metabolic disposition of clofibrate. *Drug Metabol. Drug Interact.* **3(1 & 2)**, 77-103 (1980).
3. Cayen, M.N., Ferdinandi, E.S., Greselin, E., *et al.* Clofibrate and clofibric acid: Comparison of the metabolic disposition in rats and dogs. *J. Pharmacol. Exp. Ther.* **200(1)**, 33-43 (1977).
4. Saravanan, M., Karthika, S., Malarvizhi, A., *et al.* Ecotoxicological impacts of clofibric acid and diclofenac in common carp (*Cyprinus carpio*) fingerlings: Hematological, biochemical, ionoregulatory and enzymological responses. *J. Hazard. Mater.* **195**, 188-194 (2011).
5. Tixier, C., Singer, H.P., Oellers, S., *et al.* Occurrence and fate of carbamazepine, clofibric acid, diclofenac, ibuprofen, ketoprofen, and naproxen in surface waters. *Environ. Sci. Technol.* **37(6)**, 1061-1068 (2003).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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