

Product Data Sheet

Product Name: Tianeptine Metabolite MC5

Cat. No.: GC92000

Chemical Properties

Cas. No. 104732-22-1

Chemical Name 5-[(3-chloro-6,11-dihydro-6-methyl-5,5-dioxidodibenzo[c,f][1,2]thiazepin-11-yl)amino]-pentanoic acid

SMILES O=C(CCCCNC1C2=C(N(S(=O)(C3=CC(Cl)=CC=C31)=O)C)C=CC=C2)O

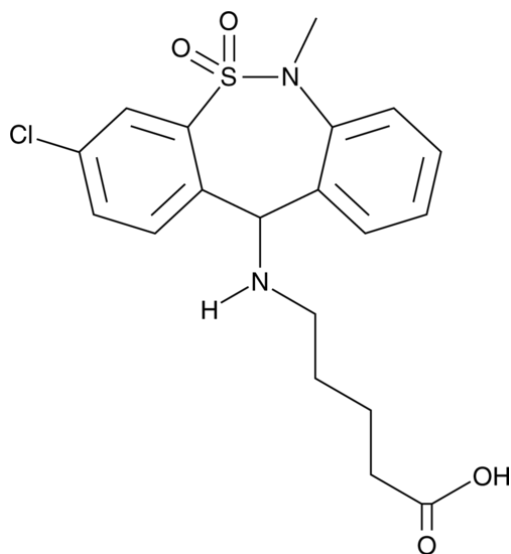
Formula $C_{19}H_{21}ClN_2O_4S$ M.Wt 408.9

Solubility Dichloromethane: Slightly soluble, DMSO: Slightly soluble, Methanol: Slightly soluble Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Tianeptine metabolite MC5 is an active metabolite of the atypical antidepressant tianeptine.¹ It is

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formed from tianeptine by β -oxidation.² Tianeptine metabolite MC5 selectively induces G protein activation in bioluminescence resonance energy transfer (BRET) assays using HEK293T cells expressing the human μ -opioid receptor (MOR) over the human δ -opioid receptor (DOR; EC₅₀s = 0.454 and >100 nM, respectively).¹ It decreases immobility in the forced swim test in wild-type mice, but not MOR knockout mice, indicating MOR-dependent antidepressant-like activity when administered at a dose of 30 mg/kg.

References:

- [1]. Samuels, B.A., Nautiyal, K.M., Kruegel, A.C., et al. The behavioral effects of the antidepressant tianeptine require the mu-opioid receptor. *Neuropsychopharmacology* 42(10):2052-2063 (2017).
- [2]. Szafarz, M., Wencel, A., Pocięcha, K., et al. Pharmacokinetic study of tianeptine and its active metabolite MC5 in rats following different routes of administration using a novel liquid chromatography tandem mass spectrometry analytical method. *Naunyn-Schmiedeberg's Arch. Pharmacol.* 391(2):185-196 (2017).

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