

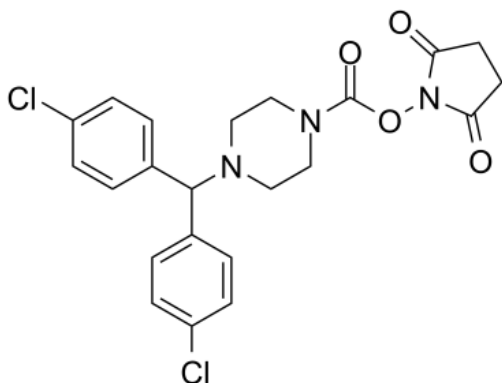
Product Data Sheet

Product Name: MJN110
Cat. No.: GC38135

Chemical Properties

Cas. No. 1438416-21-7
SMILES O=C(N1CCN(C(C2=CC=C(Cl)C=C2)C3=CC=C(Cl)C=C3)CC1)ON4C(CCC4=O)=O
Formula $C_{22}H_{21}Cl_2N_3O_4$ M.Wt 462.33
Solubility DMSO: 250 mg/mL (540.74 mM) Storage Store at -20°C
General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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

MJN110 is an orally active and selective monoacylglycerol lipase (MAGL) inhibitor with IC₅₀s of 9.1 nM and 2.1 nM for hMAGL and 2-arachidonoylglycerol (2-AG), respectively[1]. MJN110 produces opioid-sparing effects and displays strong antihyperalgesic activity[2].

MJN110 (0.01-1000 nM; 4 hours) has the primary serine hydrolase target, hMAGL, with an IC₅₀ of ~1 nM and 10- and 100-fold selectivity windows over ABHD6 and LYPLA1/2, respectively[2]. Western Blot Analysis[2] Cell Line: Human-derived PC3 cells

Caution: Product has not been fully validated for medical applications. For research use only.

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MJN110 (i.p.; 0.0818 mg/kg; twice daily for 5.5 days) reverses chronic constriction injury (CCI)-induced mechanical allodynia and thermal hyperalgesia in a dose-dependent manner. The respective ED50 value (95% confidence limits) is 0.430 (0.233-0.793) mg/kg[1]. Animal Model: Male C57BL/6J mice ranged from 18 to 35 g[1]

[1]. Wilkerson JL, et al. The Selective Monoacylglycerol Lipase Inhibitor MJN110 Produces Opioid-Sparing Effects in a Mouse Neuropathic Pain Model. J Pharmacol Exp Ther. 2016 Apr;357(1):145-56. [2]. Niphakis MJ, et al. Evaluation of NHS carbamates as a potent and selective class of endocannabinoid hydrolase inhibitors. ACS Chem Neurosci. 2013 Sep 18;4(9):1322-32.

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