

Product Data Sheet

Product Name: 3-(10, 11-Dihydro-5H-dibenzo[b, f]azepin-5-yl)-N, N-dimethylpropan-1-amine
Cat. No.: GF34004

Chemical Properties

Cas. No. 50-49-7

Formula $C_{19}H_{24}N_2$

M.Wt 280.42

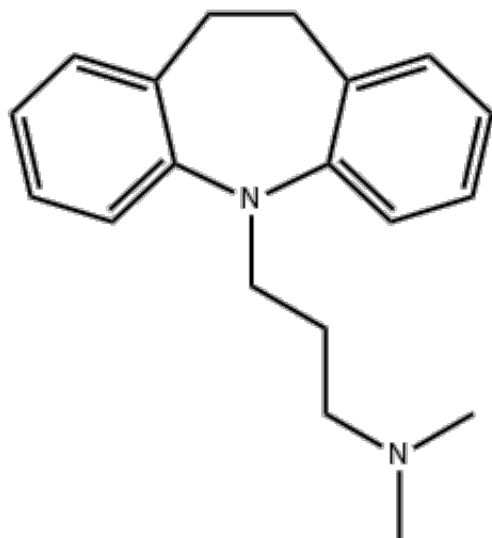
Solubility

Storage -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

Imipramine is an orally active tertiary amine tricyclic antidepressant. Imipramine is a Fascin1 inhibitor.

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

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with antitumor activities. Imipramine also inhibits serotonin transporter with an IC₅₀ value of 32 nM. Imipramine stimulates U-87MG glioma cells autophagy and induces HL-60 cell apoptosis. Imipramine shows neuroprotective and immunomodulatory effects.

Imipramine (0.5-300 μ M, 3 days) inhibits HCT-116 cell viability^[1].

Imipramine (20 μ M) inhibits cell migration (7 h) and invasion (48 h)^[1].

Imipramine (50 μ M, 0-240 min) inhibits the PI3K/Akt/mTOR signaling pathway in U-87MG glioma cells^[2].

Imipramine (60 μ M, 24 h) stimulates U-87MG glioma cells autophagy^[2].

Imipramine (80 μ M, 24 h) induces HL-60 cell apoptosis^[3].

Imipramine (20 mg/kg, i.p. or 15 mg/kg, p.o.; daily for 24 days) attenuates neuroinflammatory signaling and reverses stress-induced social avoidance in mice^[4].

[1]. Albuquerque-González B, et al. New role of the antidepressant imipramine as a Fascin1 inhibitor in colorectal cancer cells. *Exp Mol Med*. 2020 Feb;52(2):281-292.

[2]. Jeon SH, et al. The tricyclic antidepressant imipramine induces autophagic cell death in U-87MG glioma cells. *Biochem Biophys Res Commun*. 2011 Sep 23;413(2):311-7.

[3]. Xia Z, et al. The antidepressants imipramine, clomipramine, and citalopram induce apoptosis in human acute myeloid leukemia HL-60 cells via caspase-3 activation. *J Biochem Mol Toxicol*. 1999;13(6):338-47.

[4]. Ramirez K, et al. Imipramine attenuates neuroinflammatory signaling and reverses stress-induced social avoidance. *Brain Behav Immun*. 2015 May;46:212-20.

[5]. Balkovetz DF, et al. Evidence for an imipramine-sensitive serotonin transporter in human placental brush-border membranes. *J Biol Chem*. 1989 Feb 5;264(4):2195-8.

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