

Product Data Sheet

Product Name: Carba1
Cat. No.: GC80482

Chemical Properties

Cas. No. 2635394-10-2

Formula $C_{18}H_{15}ClN_2$

M.Wt 294.78

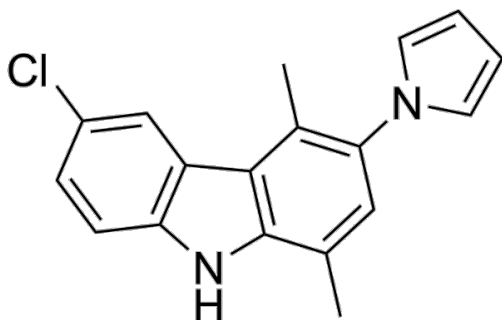
Solubility

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

Carba1 is a bifunctional Carbazole derivative that activates nicotinamide phosphoribosyltransferase (NAMPT) and enhances NAD biosynthesis. Carba1 binds to colchicine site of tubulin, enhancing the anti-tumor effect of various chemotherapy drugs, such as Paclitaxel. Carba1 exerts neuroprotective effect and can regulate cell energy metabolism. Carba1 can be used for the researches of cancer and chemotherapy-induced peripheral neuropathy (CIPN) [1].

In Vivo, Carba1 (50 mg/kg; i.p.; on days 0, 1, 2, 4, 7, 9) prevents tactile allodynia and neurodegeneration in Paclitaxel-induced rats neuropathy model [1]. Carba1 (60 mg/kg; i.v.; every 2

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

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days for 10 days) does not promote tumor growth and does not inhibit the antitumor activity of Paclitaxel in tumor growth modeling^[1].

In Vitro, Carba1 (12 μ M; 72 h) synergizes with Paclitaxel, Docetaxel, nab-Paclitaxel, and Epothilone-B to inhibit HeLa cell viability, reducing their GI50 values by 2.6, 3.8, 1.8 and 4.4 folds^[1]. Carba1 (1-20 μ M; 60 mins) enhances NAMPT activity in HeLa cells^[1]. Carba1 (12 μ M; 72 h) protects adult mouse DRG neurons from axonal degeneration induced by Paclitaxel, Cisplatin and Bortezomib, reducing the degeneration index^[1]. Carba1 (1-10 μ M; 24 h) protects against Cisplatin-induced neurotoxicity and myelination impairment in rat DRG neurons^[1]. Carba1 (12 μ M, 2 h) regulates HeLa cell metabolism, increasing lactate, glutamate, ATP, and GTP levels, decreasing NAD⁺ levels, and enhancing glycolysis and glutaminolysis^[1].

References:

[1]. Bosc L, et al. Preventing neuropathy and improving anticancer chemotherapy with a carbazole-based compound. Sci Adv. 2025 Oct 31;11(44):eadw6328.

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