

Product Data Sheet

Product Name: CA-5f
Cat. No.: GC33218

Chemical Properties

Cas. No. 1370032-19-1

SMILES O=C(/C(CN(C)C/1)=C/C2=CNC3=C2C=CC=C3)C1=C\C4=CC=C(OC)C(OC)=C4

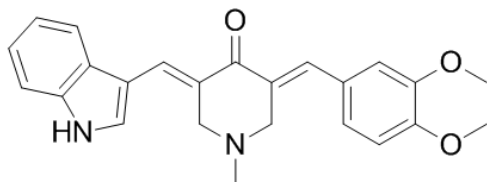
Formula $C_{24}H_{24}N_2O_3$ M.Wt 388.46

Solubility DMSO : 77.5 mg/mL (199.51 mM); Water : < 0.1 mg/mL (insoluble) 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

CA-5f is a potent late-stage macroautophagy/autophagy inhibitor via inhibiting autophagosome-lysosome fusion. CA-5f increases LC3B-II (a marker to monitor autophagy) and SQSTM1 protein both in A549 cells and HUVECs. Anti-tumor activity[1].

CA-5f (0-40 μM, 6 hour) concentration- and time-dependently elevates the level of LC3B-II (a marker

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

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to monitor autophagy) and SQSTM1 protein both in A549 cells and HUVECs[1].CA-5f (20 μ M, 6 hours) inhibits the degradation of autophagosomes when treated alone or in combination Bafilomycin A1 (100 nM) or Chloroquine (30 μ M) in A549 cells and HUVECs[1].CA-5f (20 μ M) neither impairs the hydrolytic function nor the quantity of lysosomes[1].CA-5f (20 μ M, 96 hours) inhibits the growth of A549 cells, and less cytotoxic to normal HUVECs[1].|| Cell Viability Assay[1]||Cell Line:|A549, HUVECs|Concentration:|20 μ M|Incubation Time:|96 hours|Result:|Exhibited more cytotoxicity against A549 cells compared with normal HUVECs.|| Western Blot Analysis[1]||Cell Line:|A549 cells and HUVECs|Concentration:|0-40 μ M|Incubation Time:|6 hours|Result:|Elevated LC3B-II (a marker to monitor autophagy) and SQSTM1 protein levels in a concentration- and time-dependent manner.

CA-5f (40 mg/kg, i.p., every 2 days for up to 30 days) is well tolerated, and potently inhibits the growth of tumor in nude mice bearing A549 lung cancer cells[1]. CA-5f (40 mg/kg, i.p.) suppresses autophagic flux and induces apoptosis in nude mice bearing A549 lung cancer cells[1].|| Animal Model:|Nude mice bearing A549 lung cancer cells[1]|Dosage:|40 mg/kg|Administration:|Injected via caudal vein, every 2 days for up to 30 days|Result:|Significantly suppressed tumor volume and weight in mice, increased the number of apoptotic cells in mice.

[1]. Zhang L, et al. Identification of compound CA-5f as a novel late-stage autophagy inhibitor with potent anti-tumor effect against non-small cell lung cancer. Autophagy. 2019 Mar;15(3):391-406.

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