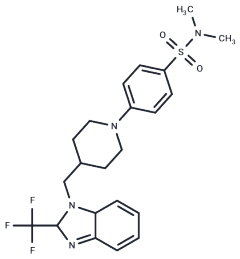
Data Sheet (Cat.No.T64357)

TargetMol

FA16

Chemical Properties



CAS No. :

Formula: C22H27F3N4O2S

Molecular Weight: 468.54

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	FA16 is a selective, metabolically stable ferroptosis inducer with an IC50 value of 1.26 μM.FA16 is a derivative of 2-(trifluoromethyl)benzimidazole.FA16 inhibits the cystine/glutamate inverse transporter protein (system Xc-)-mediated exchange of intracellular glutamate for extracellular cystine.FA16 significantly inhibited tumor growth in a HepG2 xenograft tumor model. HepG2 xenograft tumor model significantly inhibited tumor growth.
Targets(IC50)	Ferroptosis
In vitro	FA16 (15 or 30 mg/kg; intraperitoneal injection; every other day for 21 days; BALB/c nude mice bearing HepG2 tumors (subcutaneously)) significantly inhibited tumor growth in a 786-O xenograft mouse model, with TGI values of 47.6% and 77.1%, respectively.FA16 was safe (did not induce body weight loss), and it also induced tumor tissue iron death occurred. [1]
In vivo	FA16 (15 or 30 mg/kg; intraperitoneal injection; every other day for 21 days; BALB/c nude mice bearing HepG2 tumors (subcutaneously)) significantly inhibited tumor growth in a 786-O xenograft mouse model, with TGI values of 47.6% and 77.1%, respectively.FA16 was safe (did not induce body weight loss), and it also induced tumor tissue iron death occurred. [1]

Solubility Information

Solubility	DMSO: 4.69 mg/mL (10.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1343 mL	10.6714 mL	21.3429 mL
5 mM	0.4269 mL	2.1343 mL	4.2686 mL
10 mM	0.2134 mL	1.0671 mL	2.1343 mL
50 mM	0.0427 mL	0.2134 mL	0.4269 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Fang Y, et al. Discovery and optimization of 2-(trifluoromethyl)benzimidazole derivatives as novel ferroptosis inducers in vitro and in vivo. Eur J Med Chem. 2023 Jan 5;245(Pt 1):114905.