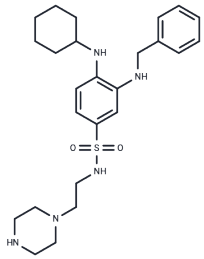
Data Sheet (Cat.No.T5343)

TargetMol

UAMC-3203

Chemical Properties



CAS No. : 2271358-64-4

Formula: C25H37N5O2S

Molecular Weight: 471.66

Storage: Store at low temperature,Keep away from moisture
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	UAMC-3203 is a potent and selective ferroptosis inhibitor with an IC50 value of 12 nM.
Targets(IC50)	Ferroptosis
In vitro	UAMC-3203 exhibits even lower IC50-values (10 nM in IMR32 Neuroblastoma cells.) combined with an excellent kinetic solubility (> 200 μM).
In vivo	In blood plasma of mice having received a daily injection of compound UAMC-3203 over a period of 4 weeks, Plasma alanine aminotransferase (ALT), aspartate aminotransferase (AST), LDH, creatine kinase (CK), creatinine, urea and troponin T levels were all comparable to background values detected in control mice.
Cell Research	In order to determine IC50-values, human neuroblastoma cells (IMR-32) were seeded in a 96-well plate at a density of 25,000 cells/well. The next day, the cells were pretreated for 1h (in triplicates) with a 1/3 dilution series of ferrostatin-1 analogues ranging from 5μM to 0.68nM and Sytox Green (1.6 μM) and a 1/2 dilution series of ferrostatin-1 analogues ranging from 200 nM to 0.78nM and Sytox Green (1.6 μM) for erastin and ferrous ammonium sulphate respectively. After stimulating the cells with erastin (10 μM) or ferrous ammonium sulphate (600 μM), the plate was transferred to a temperature- and CO2-controled FLUOstar Omega fluorescence plate reader. Sytox Green intensity was measured after 13h using an excitation filter of 485 nm and an emission filter of 520 nm. In each setup, Triton-X100 (0.05%) was used to induce lyses of the cells in 6 wells/plate, and was used as 100% cell death reference. The percentage of the cell death was calculated by the formula ((AVG[erastin] - AVG[background]) /(AVG[Triton-X100] - AVG[background])) × 100. Cell death percentage was plotted in GraphPad Prism 6, and IC50-values were calculated using a sigmoidal dose-response (variable slope) curve.
Animal Research	Vehicle solution (2% DMSO) or compound was administered daily at a concentration of 2 mM (in 0.9% NaCl containing 2% DMSO; 200 μL / 20 g body weight) by intraperitoneal injection. Body temperature and weight were monitored daily. On day 28 the mice were anesthetized with isoflurane and blood was sampled. Hereafter, mice were sacrificed by cervical dislocation. ALT, AST and LDH levels in plasma were measured. CK, creatinine, urea and troponin T were determined.

Solubility Information

Solubility	DMSO: 50 mg/mL (106.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.24 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1202 mL	10.6009 mL	21.2017 mL
5 mM	0.424 mL	2.1202 mL	4.2403 mL
10 mM	0.212 mL	1.0601 mL	2.1202 mL
50 mM	0.0424 mL	0.212 mL	0.424 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

Devisscher L, et al. Discovery of Novel, Drug-Like Ferroptosis Inhibitors with in Vivo Efficacy. J Med Chem. 2018 Nov 21;61(22):10126-10140.