Product Data Sheet

Product Name: DI-87
Cat. No.: GC64342

Chemical Properties

Cas. No.	2107280-55-5		
Formula	C23H30N6O3S2	M.Wt	502.65
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	DI-87		

Background

DI-87 is an orally active and selective deoxycytidine kinase (dCK) inhibitor with an EC50 of 10.2 nM. DI-87 has antitumor activity and is used in combination therapy against tumors expressing dCK[1].

(S)-DI-87 exhibits a much higher IC50 value (IC50=468 nM) relative to DI-87 ((R)-DI-8) (IC50=3.15 nM) in CEM T-ALL cells for inhibition of dCK activity[1]. DI-87 (1 μ for 72 hours) rescues human cell line CCRF-CEM (CEM) cells from the anti-proliferative effects of gemcitabine, a dCK-dependent nucleoside analog prodrug, with an EC50 of 10.2 nM[1].

DI-87 (5-25 mg/kg; oral gavage) exhibits full dCK inhibition for 27 hours, and enzyme activity fully recovered by 36 hours with 25 mg/kg dose[1]. DI-87 (10-50 mg/kg; oral) has plasma concentrations of between 1 and 3 hours and plasma half-life of 4 hours[1]. DI-87 (10 mg/kg/day or 25 mg/kg/twice a day; oral; for 16-18 days) with thymidine (2 g/kg; ip; twice a day) results in reduced tumor growth in male NSG mice implanted with CEM tumors[1].

[1]. Soumya Poddar, et al. Development and Preclinical Pharmacology of a Novel dCK Inhibitor, DI-87. Biochem Pharmacol. 2020 Feb;172:113742.

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