Product Data Sheet

Product Name: TH287 hydrochloride
Cat. No.: GC37775

Chemical Properties

Cas. No.	1638211-05-8		
SMILES	NC1=NC(C2=CC=CC(Cl)=C2Cl)=CC(NC)=N1.[H]Cl		
Formula	$C_{11}H_{11}Cl_3N_4$	M.Wt	305.59
Solubility	Soluble in DMSO	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	TH287 hydrochloride		

Background

Human mutT homolog (MTH1) is a nucleotide pool sanitizing enzyme that cleaves oxidized nucleotides (dNTPs) to prevent incorporation of damaged bases during DNA replication. Cancer cells rely on MTH1 activity in order to avoid cell death. TH287 is an MTH1 inhibitor (IC_{50} = 0.8 nM) that selectively kills cancer cell lines (IC_{50}s = 0.8-3.06 ? M) without significant cytotoxicity towards primary or immortalized cells (IC_{50}s = ≥20 ? M).[1] At up to 100 ?M it does not show significant effect towards the related nudix hydrolase protein family members MTH2, NUDT5, NUDT12, NUDT14, and NUDT16, as well as other proteins with known nucleoside triphosphate pyrophosphatase activity (dCTPase, dUTPase, and ITPA).[1]

1.Gad, H., Koolmeister, T., Jemth, A.S., et al.MTH1 inhibition eradicates cancer by preventing sanitation of the dNTP poolNature508215-242(2014)

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