

TH588

Chemical Properties

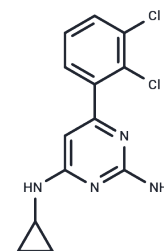
CAS No. : 1609960-31-7

Formula: C₁₃H₁₂Cl₂N₄

Molecular Weight: 295.17

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	TH588 is nudix hydrolase family inhibitor that effectively and selectively engages and inhibits the MTH1 (IC ₅₀ : 5 nM) in cells.
Targets(IC ₅₀)	DNA/RNA Synthesis, MTH1
In vitro	In mice carrying xenografts with the BRAFV600E mutation, TH588 (30 mg/kg, subcutaneously) reduces tumor growth rates. Additionally, in mice bearing SW480 colon or MCF7 breast cancer xenografts, TH588 (30 mg/kg, subcutaneously) inhibits MTH1, resulting in decreased tumor growth.
In vivo	TH588 induces DNA damage in U2OS cells, triggering ATM-p53-mediated DNA repair and apoptotic responses. It exhibits selective cytotoxicity towards U2OS and other cancer cell lines while showing minimal toxicity towards several primary or immortalized cell lines.

Solubility Information

Solubility	DMSO: 88.33 mg/mL (299.25 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 (6.78 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3879 mL	16.9394 mL	33.8788 mL
5 mM	0.6776 mL	3.3879 mL	6.7758 mL
10 mM	0.3388 mL	1.6939 mL	3.3879 mL
50 mM	0.0678 mL	0.3388 mL	0.6776 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

Gad H, et al. Nature. 2014, 508(7495), 215-221.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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