

TAS-114

## Chemical Properties

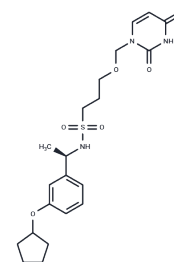
CAS No. : 1198221-21-4

Formula: C<sub>21</sub>H<sub>29</sub>N<sub>3</sub>O<sub>6</sub>S

Molecular Weight: 451.54

Storage: Store at low temperature, Store under nitrogen  
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	TAS-114 is an orally active dual inhibitor of dUTPase and dihydropyrimidine dehydrogenase (DPD). TAS-114 targets the intercellular metabolism of 5-FU to enhance antitumor activity and modulates catabolic pathways to improve the systemic availability of 5-FU.
Targets(IC50)	Others, DNA/RNA Synthesis
In vitro	In HeLa, NUGC-4, NCI-H441, HT-29, CFPAC-1, and MCF-7 cell lines, TAS-114 (72 hours; 1 μM, 3 μM, and 10 μM) can significantly enhance the cytotoxicity of FdUrd and 5-FU against various cancer cell lines in a dose-dependent manner[1].
In vivo	In BALB/c nude mice with MX-1 human breast cancer xenografts, TAS-114 (37.5 to 1200 mg/kg/day; orally; daily; 1-14 days) can decrease the tolerable doses of Capecitabine (539 mg/kg/day) in a dose-dependent manner in mice[1].

## Solubility Information

Solubility	DMSO: 80 mg/mL (177.17 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: 3.3 mg/mL (7.31 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

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	1mg	5mg	10mg
1 mM	2.2146 mL	11.0732 mL	22.1464 mL
5 mM	0.4429 mL	2.2146 mL	4.4293 mL
10 mM	0.2215 mL	1.1073 mL	2.2146 mL
50 mM	0.0443 mL	0.2215 mL	0.4429 mL

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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

Yano W, et al. TAS-114, a First-in-Class Dual dUTPase/DPD Inhibitor, Demonstrates Potential to Improve Therapeutic Efficacy of Fluoropyrimidine-Based Chemotherapy. Mol Cancer Ther. 2018 Aug;17(8):1683-1693.

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