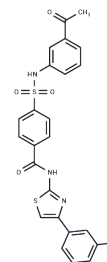


PHGDH-IN-3

Chemical Properties

CAS No. :	2893778-31-7
Formula:	C ₂₄ H ₁₈ FN ₃ O ₄ S ₂
Molecular Weight:	495.55
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	PHGDH-IN-3 is an orally active phosphoglycerate dehydrogenase (PHGDH) inhibitor with an IC ₅₀ of 2.8 μM against PHGDH, and it can be used in cancer research.
Targets(IC ₅₀)	Dehydrogenase
In vitro	PHGDH-IN-3 (compound D8) exhibits strong enzymatic inhibitory activity with an IC ₅₀ value of 2.8 μM and demonstrates high binding affinity for PHGDH protein with a K _d value of 2.33 μM. It is particularly effective against cell lines with amplified or overexpressed PHGDH genes and restricts de novo serine synthesis from glucose in MDA-MB-468 cells.[1]
In vivo	PHGDH-IN-3 (compound D8) (1, 3 mg/kg; p.o., i.v.) exhibits excellent in vivo pharmacokinetic properties.[1] Additionally, PHGDH-IN-3 (12.5, 25, 50 mg/kg; i.p.; once daily for 31 days) demonstrated significant antitumor effects in a PC9 xenograft mouse model.[1]

Solubility Information

Solubility	DMSO: 90 mg/mL (181.62 mM), Sonication and heating to 70°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 5 mg/mL (10.09 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	2.018 mL	10.0898 mL	20.1796 mL
5 mM	0.4036 mL	2.018 mL	4.0359 mL
10 mM	0.2018 mL	1.009 mL	2.018 mL
50 mM	0.0404 mL	0.2018 mL	0.4036 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

Gao D, et al. Discovery of Novel Drug-like PHGDH Inhibitors to Disrupt Serine Biosynthesis for Cancer Therapy. J Med Chem. 2023;66(1):285-305.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481