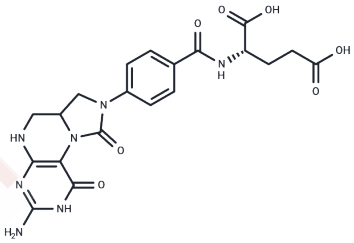
Data Sheet (Cat.No.T15827)

TargetMol

LY 345899

Chemical Properties



CAS No. : 10538-99-5

Formula: C20H21N7O7

Molecular Weight: 471.42

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	LY 345899 is a folate analog that inhibits methylenetetrahydrofolate dehydrogenase and MTHFD2, with IC50 values of 96 nM and 663 nM, respectively, and a Ki of 18 nM for MTHFD1.
Targets(IC50)	Dehydrogenase,DHFR

Solubility Information

Solubility	DMSO: 250 mg/mL (530.31 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (21.21 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (21.21 mM),Solution. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1213 mL	10.6063 mL	21.2125 mL
5 mM	0.4243 mL	2.1213 mL	4.2425 mL
10 mM	0.2121 mL	1.0606 mL	2.1213 mL
50 mM	0.0424 mL	0.2121 mL	0.4243 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

Schmidt A, et al. Structures of three inhibitor complexes provide insight into the reaction mechanism of the human methylenetetrahydrofolate dehydrogenase/cyclohydrolase. Biochemistry. 2000 May 30;39(21):6325-35.
Chen C, Lai X, Zhang Y, et al. NADPH Metabolism Determines the Leukemogenic Capacity and Drug Resistance of AML Cells. Cell reports. 2022 Apr 5;39(1):110607.
Wang J, Yu Z, Jiang Y, et al.Downregulation of MTHFD2 Inhibits Proliferation and Enhances Chemosensitivity in Hepatocellular Carcinoma via PI3K/AKT Pathway.Frontiers in Bioscience-Landmark.2024, 29(1): 35.
Tedeschi PM, et al. Mitochondrial Methylenetetrahydrofolate Dehydrogenase (MTHFD2) Overexpression Is Associated with Tumor Cell Proliferation and Is a Novel Target for Drug Development. Mol Cancer Res. 2015 Oct;13 (10):1361-6.
Gustafsson R, et al. Crystal Structure of the Emerging Cancer Target MTHFD2 in Complex with a Substrate-Based Inhibitor. Cancer Res. 2017 Feb 15;77(4):937-948.

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