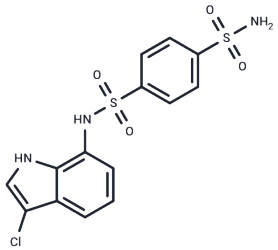
Data Sheet (Cat.No.T4321)

TargetMol

Indisulam

Chemical Properties



CAS No. : 165668-41-7

Formula: C14H12ClN3O4S2

Molecular Weight: 385.85

Storage: Keep away from direct sunlight
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	Indisulam (E 7070) is a carbonic anhydrase inhibitor and antitumor CDK inhibitor that targets the G1 phase of the cell cycle by depleting cyclin E, inducing p53 and p21, and inhibiting CDK2, thereby causing a blockade in the G1/S transition.
Targets(IC50)	CDK,Carbonic Anhydrase,Molecular Glues
In vitro	In vitro, indisulam has antiproliferative effects on a wide range of human tumor lines with HCT116 colorectal being the most sensitive and NCI-H596 non-small cell lung cancer (NSCLC) the most resistant (IC50s = 0.11 and 94 μg/ml, respectively). It increases the number of P388 murine leukemia cells in the G1 phase of the cell cycle in a dose-dependent manner and exerts time-dependent cytotoxicity against HCT116 cells.
In vivo	In vivo, indisulam suppresses tumor growth and decreases tumor volume in murine HCT116, SW620, and HCT15 colorectal and LX-1 and PC9 lung cancer xenograft models. Indisulam induces proteasomal degradation of RNA binding motif protein 39 (RBM39) through association with the CUL4-DCAF15 E3 ubiquitin ligase in vitro.It is also an inhibitor of carbonic anhydrase in H. pylori (Ki = 310-562 nM). Formulations containing indisulam are under Clinicalal investigation for the treatment of solid tumors.

Solubility Information

Solubility	DMSO: 145 mg/mL (375.79 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 (5.18 mM),Sonication is recommended. *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	2.5917 mL	12.9584 mL	25.9168 mL
5 mM	0.5183 mL	2.5917 mL	5.1834 mL
10 mM	0.2592 mL	1.2958 mL	2.5917 mL
50 mM	0.0518 mL	0.2592 mL	0.5183 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

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Lu J, Jiang H, Li D, et al. Proximity Labeling, Quantitative Proteomics, and Biochemical Studies Revealed the Molecular Mechanism for the Inhibitory Effect of Indisulam on the Proliferation of Gastric Cancer Cells. Journal of Proteome Research. 2021

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Lu J, Li D, Jiang H, et al.The aryl sulfonamide indisulam inhibits gastric cancer cell migration by promoting the ubiquitination and degradation of the transcription factor ZEB1.Journal of Biological Chemistry.2023: 103025.

Hou C, Wu X, Shi R, et al.Subtle structural alteration in indisulam switches the molecular mechanisms for the inhibitory effect on the migration of gastric cancer cells.Biomedicine & Pharmacotherapy.2024, 172: 116259.

Nishimori I,et al.Carbonic anhydrase inhibitors: cloning and sulfonamide inhibition studies of a carboxyterminal truncated alpha-carbonic anhydrase from Helicobacter pylori.Bioorg Med Chem Lett. 2006 Apr 15;16(8):2182-8.

Siegel-Lakhai WS,etal.A dose-escalation study of indisulam in combination with capecitabine (Xeloda) in patients with solid tumours.Br J Cancer. 2008 Apr 22;98(8):1320-6.

Liu C, Shen M, Liu Y, et al.CRISPRi/a screens in human iPSC-cardiomyocytes identify glycolytic activation as a druggable target for doxorubicin-induced cardiotoxicity.Cell Stem Cell.2024

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