Data Sheet (Cat.No.T201584)

TargetMol

Oxamic acid

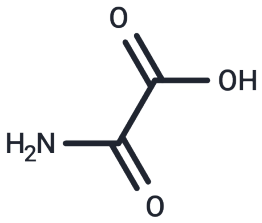
Chemical Properties

CAS No. : 471-47-6

Formula: C2H3NO3

Molecular Weight: 89.05

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	Oxamic acid is an LDHA (lactate dehydrogenase A) inhibitor with antitumor activity that induces cancer cell apoptosis, downregulates EGFR expression, and inhibits cancer stem cell properties and EMT.
Targets(IC50)	EGFR,Dehydrogenase
In vitro	After 24-72 hours of treatment with 10 μM Oxamic acid, cell proliferation in nasopharyngeal carcinoma cells was inhibited in a dose- and time-dependent manner [2]. Exposure to 0-100 mM oxamate for 24 hours induced G2/M phase cell cycle arrest in CNE-1 and CNE-2 cells [2]. Treatment with 0-100 mM oxamate for 48 hours activated caspase-3 and the mitochondrial pathway, leading to apoptosis in nasopharyngeal carcinoma cells [2]. Following 24-hour exposure to 0-100 mM oxamate, intracellular reactive oxygen species levels were elevated in nasopharyngeal carcinoma cells [2].
In vivo	Compared to using Oxamic acid alone or radiation therapy alone, the combination of Oxamic acid (750 mg/kg, intraperitoneal injection, once daily for 3 weeks) with radiation therapy significantly enhanced tumor suppression effects in female Balb/c nude mice inoculated with CNE-1 cells [2].

Solubility Information

Solubility	H2O: 40 mg/mL (449.19 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	11.2296 mL	56.1482 mL	112.2965 mL
5 mM	2.2459 mL	11.2296 mL	22.4593 mL
10 mM	1.123 mL	5.6148 mL	11.2296 mL
50 mM	0.2246 mL	1.123 mL	2.2459 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

Xiang J, et al. LDH-A inhibitors as remedies to enhance the anticancer effects of PARP inhibitors in ovarian cancer cells. Aging (Albany NY). 2021 Dec 16;13(24):25920-25930.
Zhai X, et al. Inhibition of LDH-A by oxamate induces G2/M arrest, apoptosis and increases radiosensitivity in nasopharyngeal carcinoma cells. Oncol Rep. 2013 Dec;30(6):2983-91.
Muramatsu H, et al. Targeting lactate dehydrogenase-A promotes docetaxel-induced cytotoxicity predominantly in castration-resistant prostate cancer cells. Oncol Rep. 2019 Jul;42(1):224-230.