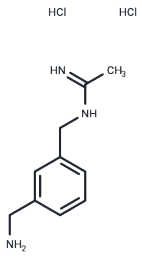
Data Sheet (Cat.No.T3491)

TargetMol

1400W dihydrochloride

Chemical Properties



CAS No. : 214358-33-5

Formula: C10H17Cl2N3

Molecular Weight: 250.17

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	1400W dihydrochloride (N-(3-(Aminomethyl)benzyl)acetamidine) is a highly effective and specific inhibitor of inducible NOS2 (iNOS).
Targets(IC50)	Apoptosis,NOS,NO Synthase
In vitro	1400W is either an irreversible inhibitor or an extremely slowly reversible inhibitor of human iNOS. Inhibition of human iNOS by 1400W is time-dependent. 1400W is competitive with L-arginine. 1400W is not a substrate for iNOS[1].
In vivo	1400W selectively prevents microvasculature injury in rats. 1400W is greater than 50-fold more potent against iNOS than eNOS in a rat model of endotoxin-induced vascular injury. Moreover, 1400W also dose-dependently reduces LPS-induced vascular leakage associated with iNOS induction in the colon, lung, liver, kidney, and heart. The maximal protection is close to 100% for all organs except the kidney (kidney:54%)[1]. 1400W has an ameliorative effect on both oxidative and nitrosative stress in the kidneys against renal I/R injury in rats[2]. Treatment with 1400W can reduce the rate of growth of solid tumors in mice[4].
Cell Research	RAW264.7 cells are treated with LPS/IFNγ for 16 h and GAPDH-p300 binding is abolished by the iNOS inhibitor 1400W (100 μM). Cell lysates are immunoprecipitated with an anti-p300 antibody and the immunoprecipitates are analysed by western blotting with an anti-GAPDH antibody. (Only for Reference)

Solubility Information

Solubility	H2O: 139.9 mM,Sonication is recommended. DMSO: 255 mg/mL (1019.31 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 (7.99 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	3.9973 mL	19.9864 mL	39.9728 mL
5 mM	0.7995 mL	3.9973 mL	7.9946 mL
10 mM	0.3997 mL	1.9986 mL	3.9973 mL
50 mM	0.0799 mL	0.3997 mL	0.7995 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

Garvey EP, et al. J Biol Chem. 199, 272(8):4959-63.
Cai J, Zhang X, Chen P, et al. The ER stress sensor inositol-requiring enzyme 1α in Kupffer cells promotes hepatic ischemia-reperfusion injury. Journal of Biological Chemistry. 2021: 101532.
Fei Q, Zhang J, Chen L, et al.Modulating ferroptosis and mycobactericidal activity in lung epithelial cells via YY1/iNOS pathway.Life Sciences.2024: 123131.
Ersoz N, et al. Ren Fail. 2009, 31(8):704-10.
Sen N, et al. Nat Cell Biol. 2008, 10(7):866-73.
Thomsen LL, et al. Cancer Res. 1997, 57(15):3300-4.