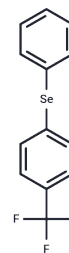


LDHA-IN-3

Chemical Properties

CAS No. :	227010-33-5
Formula:	C13H9F3Se
Molecular Weight:	301.17
Storage:	Pure form: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	LDHA-IN-3 (1-(phenylseleno)-4-(trifluoromethyl) benzene) is a potent non-competitive lactate dehydrogenase (LDHA) inhibitor with an IC50 value of 145.2 nM. LDHA-IN-3 is a selenobenzene compound that can be used in cancer research.
Targets(IC50)	Dehydrogenase
In vitro	LDHA-IN-3 (PSTMB) (0~500 μ M; 48 h; MCF-7 cells) has cytotoxic effects.[1] PSTMB (0.01~1 μ M) has a dose-dependent inhibitory effect on LDHA activity. PSTMB (0~0.5 μ M) inhibits LDHA activity in Michaelis-Menten and Lineweaver-Burk plots.[1] PSTMB (30 and 50 μ M; HT29 cells) induces ROS production and mitochondrial damage. [1] PSTMB efficiently binds to LDHA protein. PSTMB induces intrinsic pathway-mediated apoptosis in cancer cells through the production of mitochondrial ROS.[1]

Solubility Information

Solubility	DMSO: 230 mg/mL (763.69 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 (6.64 mM), Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (33.2 mM), Suspension. <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	3.3204 mL	16.6019 mL	33.2038 mL
5 mM	0.6641 mL	3.3204 mL	6.6408 mL
10 mM	0.332 mL	1.6602 mL	3.3204 mL
50 mM	0.0664 mL	0.332 mL	0.6641 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

Kim EY, et al. A Novel Lactate Dehydrogenase Inhibitor, 1-(Phenylseleno)-4-(Trifluoromethyl) Benzene, Suppresses Tumor Growth through Apoptotic Cell Death. *Sci Rep.* 2019;9(1):3969. Published 2019 Mar 8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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