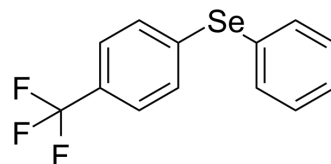


LDHA-IN-3

Cat. No.:	HY-139319		
CAS No.:	227010-33-5		
Molecular Formula:	C ₁₃ H ₉ F ₃ Se		
Molecular Weight:	301.17		
Target:	Lactate Dehydrogenase		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (332.04 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.3204 mL	16.6019 mL	33.2038 mL
		5 mM	0.6641 mL	3.3204 mL	6.6408 mL
10 mM		0.3320 mL	1.6602 mL	3.3204 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	LDHA-IN-3, as a selenobenzene compound, is a potent, noncompetitive lactate dehydrogenase (LDHA) inhibitor (IC ₅₀ =145.2 nM). LDHA-IN-3 can be used for the research of cancer ^[1] .
IC₅₀ & Target	IC ₅₀ : 145.2 nM (LDHA) ^[1]
In Vitro	PSTMB (0~500 μM; 48 hours; MCF-7 cells) shows cytotoxic effect ^[1] . PSTMB (0.01~1 μM) shows dose-dependent inhibition of LDHA activity. PSTMB (0~0.5 μM) inhibits LDHA activity in Michaelis-Menten and Lineweaver-Burk plots. PSTMB (30 and 50 μM; HT29 cells) induces ROS production and mitochondrial damage ^[1] . PSTMB can bind to LDHA protein efficiently. PSTMB induces the intrinsic pathway-mediated apoptosis of cancer cells via

production of mitochondrial ROS^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[1]

Cell Line:	MCF-7 cells
Concentration:	0~500 μ M
Incubation Time:	48 hours
Result:	Showed cytotoxic effect.

REFERENCES

[1]. 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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