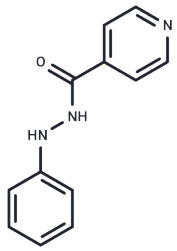
Data Sheet (Cat.No.T1869)

TargetMol
YOUR TARGET MOLECULES

PluriSIn 1

Chemical Properties



CAS No. : 91396-88-2

Formula: C12H11N3O

Molecular Weight: 213.24

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	PluriSIn 1 (NSC 14613) is an inhibitor of stearoyl-CoA desaturase (SCD1), the key enzyme in oleic acid biosynthesis, revealing a unique role for lipid metabolism in hPSCs.
Targets(IC50)	Apoptosis,Dehydrogenase,Stearoyl-CoA Desaturase (SCD)
Kinase Assay	SCD1 activity assays: Cells are plated in 6-well plates at a density of 50k to 100k cells per well. 24 h later, 20 μM PluriSIn #1 or 0.2% DMSO-control are added to the cells. After 12 h of incubation at 37 ℃, 5% CO2, the old medium is removed, cells are washed with PBS, and new medium containing 2.3 μM of 0.75 UCi [1-14C] Stearic Acid is added. The cells are incubated for up to 4 h at 37 ℃, 5% CO2. After the incubation period, the medium is discarded and the cells are washed 3 times with 2 mL of PBS. 2 mL of the mixture n-hexane: isopropanol (3:2 v:v) are added, and the cells are incubated for 30 min at 37 ℃, 5% CO2. 2 mL Folch solution (chloroform: methanol,2:1,v:v) are subsequently added. The liquid is transferred to tubes for phase partition by adding 1 mL water. The lower organic phase is evaporated and used for lipid saponification and TLC separation of the free [1-14C] Stearic Acid (substrate) and [1-14C] Oleic Acid (formed product). Lipids extracted from the cells are applied to TLC plates previously immersed in 10% NO3 Ag and activated at 120℃x60 min. Unlabeled stearic and oleic acid are added to each application point as carriers and as internal standards for identification. The plates are run with a solvent mixture of Chloroform:MeOH:AcH:DDW (90:8:1:0.8). The free fatty acids are detected by U.V. after spraying the TLC with a 2',7',dichlorofluorescein solution. The spots corresponding to stearic and oleic acid are scraped and the radioactivity counted in a sc intillating counter. SCD1 desaturase activity is calculated from the percent conversion of substrate to product and the conversion to pmol/min/106 cells.
Cell Research	Relative cell numbers are determined by fixating the cells with 0.5% glutardialdehyde and staining with methylene blue dissolved in 0.1 M boric acid (pH 8.5). Color extraction is performed using 0.1 M hydrochloric acid, and the staining (which is proportional to cell number) is quantitated by measuring absorbance at 650 nM.(Only for Reference)

Solubility Information

Solubility	DMSO: 21.3 mg/mL (100 mM), Ethanol: 21.3 mg/mL (100 mM),

(< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.6896 mL	23.4478 mL	46.8955 mL
5 mM	0.9379 mL	4.6896 mL	9.3791 mL
10 mM	0.469 mL	2.3448 mL	4.6896 mL
50 mM	0.0938 mL	0.469 mL	0.9379 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.

Reference

Ben-David U, et al. Cell Stem Cell, 2013, 12(2), 167-179.
Zhang L, Yi Y, Wang T, et al.25-Hydroxycholesterol inhibits classical swine fever virus entry into porcine alveolar