

# PluriSIn 1

Catalog No: tcsc1514



## Available Sizes

**Size:** 10mg

**Size:** 50mg



## Specifications

**CAS No:**

91396-88-2

**Formula:**

$C_{12}H_{11}N_3O$

**Pathway:**

Metabolic Enzyme/Protease

**Target:**

Stearoyl-CoA Desaturase (SCD)

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 100$  mg/mL (468.96 mM)

**Alternative Names:**

NSC 14613

**Observed Molecular Weight:**

213.24

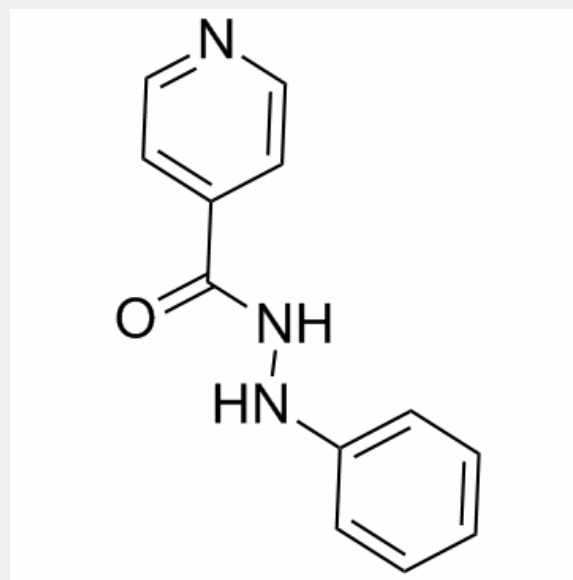
## Product Description

PluriSIn 1 is an inhibitor of stearoyl-coA desaturase (**SCD**)

), and is a pluripotent cell-specific inhibitor.

IC50 & Target: SCD<sup>[1]</sup>

**In Vitro:** PluriSIn 1, a small-molecule inhibitor of stearyl-coA desaturase (SCD), on induced pluripotent stem cells (iPS)-derived cardiomyocytes (CM). PluriSIn 1 treatment significantly decreases the mRNA and protein level of Nanog, a marker for both cell pluripotency and tumor progression; importantly, we provide evidence that PluriSIn 1 treatment at 20  $\mu$ M for 1 day significantly induces the apoptosis of Nanog-positive iPS derivatives (iPSD). In addition, PluriSIn 1 treatment at 20  $\mu$ M for 4 days diminished Nanog-positive stem cells in cultured iPSD while not increasing apoptosis of iPS-derived CM. To investigate whether PluriSIn 1 treatment prevents tumorigenicity of iPSD after cell transplantation, we intramyocardially injected PluriSIn 1- or DMSO-treated iPSD in a mouse model of myocardial infarction (MI). DMSO-treated iPSD readily formed Nanog-expressing tumors 2 weeks after injection, which is prevented by treatment with PluriSIn 1. Moreover, treatment with PluriSIn 1 does not change the expression of cTnI,  $\alpha$ -MHC, or MLC-2v, markers of cardiac differentiation ( $P > 0.05$ ,  $n = 4$ ). Importantly, PluriSIn 1-treated iPS-derived CM exhibits the ability to engraft and survive in the infarcted myocardium<sup>[1]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!