

Product Name: Thiazovivin

Catalog No.: 3845

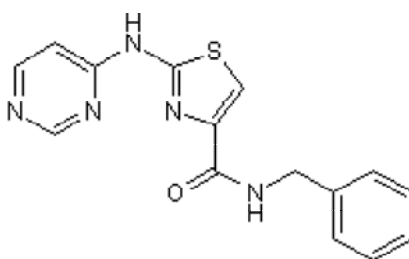
Batch No.: 3

CAS Number: 1226056-71-8

IUPAC Name: *N*-Benzyl-[2-(pyrimidin-4-yl)amino]thiazole-4-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₁₃N₅OS
Batch Molecular Weight: 311.36
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.45 (Chloroform:Methanol [9:1])
HPLC: Shows 97.1% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.86	4.21	22.49
Found	58.17	4.29	22.23

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Thiazovivin is a selective, cell-permeable Rho-associated coiled-coil containing protein kinase (ROCK) inhibitor ($IC_{50} = 0.5 \mu M$). Thiazovivin enhances the efficiency of fibroblast reprogramming to generate induced pluripotent stem cells (iPSCs) when used in combination with SB 431542 (Cat. No. 1614) and PD 0325901 (Cat. No. 4192). Thiazovivin improves the survival of human embryonic stem cells (hESCs) upon trypsinization and increases cell adhesion through the regulation of E-cadherin and significantly improves direct reprogramming efficiency. In combination with Valproic acid, sodium salt (Cat. No. 2815), Purmorphamine (Cat. No. 4551) a... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

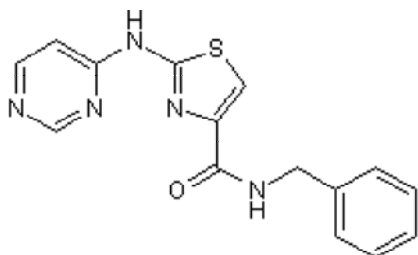
Batch Molecular Formula: $C_{15}H_{13}N_5OS$

Batch Molecular Weight: 311.36

Physical Appearance: Yellow solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



References:

Zheng et al (2016) A combination of small molecules directly reprograms mouse fibroblasts into neural stem cells. *Biochem.Biophys.Res.Commun.* **476** 42. PMID: 27207831.

Xu et al (2010) Revealing a core signaling regulatory mechanism for pluripotent stem cell survival and self-renewal by small molecules. *Proc.Natl.Acad.Sci. USA* **107** 8129. PMID: 20406903.

Lin et al (2009) A chemical platform for improved induction of human iPSCs. *Nat.Methods.* **6** 805. PMID: 19838168.

Storage: Store at $-20^{\circ}C$

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}C$ water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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