

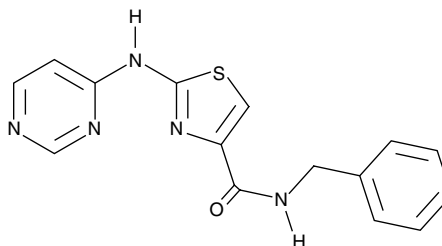
# Product Information



## Thiazovivin

Item No. 14245

**CAS Registry No.:** 1226056-71-8  
**Formal Name:** N-(phenylmethyl)-2-(4-pyrimidinylamino)-4-thiazolecarboxamide  
**Synonym:** Tzv  
**MF:** C<sub>15</sub>H<sub>13</sub>N<sub>5</sub>OS  
**FW:** 311.4  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 211, 261, 300 nm



### Laboratory Procedures

For long term storage, we suggest that thiazovivin be stored as supplied at -20°C. It should be stable for at least two years.

Thiazovivin is supplied as a crystalline solid. A stock solution may be made by dissolving the thiazovivin in the solvent of choice. Thiazovivin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of thiazovivin in these solvents is approximately 1, 14, and 10 mg/ml, respectively.

Thiazovivin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, thiazovivin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Thiazovivin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Rho-associated kinase (ROCK) is a serine-threonine kinase known to play an important role in Rho-mediated cytoskeleton remodeling and contractile force generation. Down-regulation of ROCK signaling has been shown to enable the cell-adhesion interactions necessary for maintaining human embryonic stem cell survival and self-renewal.<sup>1</sup> Thiazovivin is a selective, cell-permeable small molecule that inhibits ROCK activity at a concentration 2 μM.<sup>1</sup> It promotes the survival of induced pluripotent stem cells and improves their reprogramming efficiency from human fibroblasts more than 200 fold when used in combination with the ALK5 inhibitor SB 431542 (Item No. 13031) and the MEK inhibitor PD0325091 (Item No. 13034).<sup>1</sup>

### References

1. Xu, Y., Zhu, X., Hahm, H.S., *et al.* Revealing a core signaling regulatory mechanism for pluripotent stem cell survival and self-renewal by small molecules. *Proc. Natl. Acad. Sci. USA* **107**(18), 8129-8134 (2010).
2. Lin, T., Ambasudhan, R., Yuan, X., *et al.* A chemical platform for improved induction of human iPSCs. *Nat. Methods* **6**(11), 805-808 (2009).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/14245](http://www.caymanchem.com/catalog/14245)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 06/24/2013

### Cayman Chemical

#### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

#### Phone

(800) 364-9897  
(734) 971-3335

#### Fax

(734) 971-3640

#### E-Mail

[custserv@caymanchem.com](mailto:custserv@caymanchem.com)

#### Web

[www.caymanchem.com](http://www.caymanchem.com)