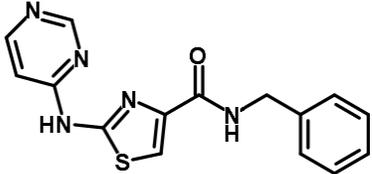




## Product Specification Sheet

<b>Product Name</b>	Stemolecule™ Thiazovivin
<b>Description</b>	Thiazovivin is a selective, cell permeable small molecule that directly targets Rho-associated kinase (ROCK) <sup>1</sup> . In addition, Thiazovivin protects human embryonic stem cells (hESCs) in the absence of ECM by regulating E-cadherin mediated cell-cell interaction <sup>1</sup> . This observation suggests that Thiazovivin promotes cell survival. In other studies Thiazovivin, in combination with inhibitors of the TGF-β receptor and MEK pathway, has shown to improve reprogramming efficiency by more than 200-fold <sup>2</sup> .
<b>Catalog Number</b>	04-0017
<b>Size</b>	1 mg
<b>Chemical Name</b>	N-benzyl-2-(pyrimidin-4-ylamino)thiazole-4-carboxamide
<b>Chemical Formula</b>	C <sub>15</sub> H <sub>13</sub> N <sub>5</sub> OS
<b>Structure</b>	
<b>Molecular Weight</b>	311.36
<b>CAS Number</b>	1226056-71-8
<b>Purity</b>	Greater than 98% by HPLC analysis
<b>Formulation</b>	Light brown powder
<b>Solubility</b>	For a 10 mM concentrated stock solution of Thiazovivin, reconstitute the compound by adding 321.2 μl of DMSO to the entire contents of the vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes. For use in cell culture, warm the medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 μM low-protein binding filter. Thiazovivin is soluble in DMSO at 100 mM.
<b>Storage and Stability</b>	Store powder at 4°C protected from light. Following reconstitution, store aliquots at -20°C. Stock solutions are stable for 6 months when stored as directed.
<b>Quality Control</b>	The purity of Thiazovivin was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. No acute cytotoxicity was observed in mouse embryonic stem cells following a 6 hour exposure to 1 nM - 100 μM of Thiazovivin.
<b>References</b>	<ol style="list-style-type: none"><li>Xu, Y., Zhu, X., Hahm, H.S., Wei, W., Hao, E., Hayek, A., and Ding, S. (2010) Revealing a core signaling regulatory mechanism for pluripotent stem cell survival and self-renewal by small molecules. <i>Proc Natl Acad Sci USA</i> 107: 8129-8134.</li><li>Lin, T., Ambasadhan, R., Yuan, X., Li, W., Hilcove, S., Abujarour, R., Lin, X., Hahm, H., Hao, E., Hayek, A., and Ding, S. (2009) A chemical platform for improved induction of human iPSCs. <i>Nature Methods</i> 6: 805-808.</li></ol>

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