



Technical Data Sheet:

Thiazovivin

Catalog Number	SML10B
Synonyms	Tzv, ROCK inhibitor
Size	10 mg
Description	Thiazovivin is a potent and selective inhibitor of Rho-associated coiled-coil protein kinase (ROCK) activity, a key player in cytoskeletal contraction and rearrangement. As ROCK inhibition occurs, human embryonic stem cell survival increases through enhanced cell-ECM attachment via E-cadherin signaling (Xu, et al.), in addition to allowing for an environment of improved human iPSC induction from fibroblasts (Lin, et al.). The addition of Thiazovivin also creates more effective conditions for the reprogramming of cord blood mononuclear cells into iPSCs (Hu, et al.).
Molecular Weight	311.36
Molecular Formula	C ₁₅ H ₁₃ N ₅ OS
Chemical Name	4-Thiazolecarboxamide, N-(phenylmethyl)-2-(4-pyrimidinylamino)-
CAS Number	1226056-71-8
Target	ROCK
Appearance	White to brown (Solid)
Purity	≥95% by LCMS
Solubility and Reconstitution	Soluble in DMSO up to 40 mM, for example: 10 mg/32.117 mL = 0.311 mg/mL = 1 mM 10 mg/6.423 mL = 1.557 mg/mL = 5 mM 10 mg/3.212 mL = 3.113 mg/mL = 10 mM 10 mg/1.606 mL = 6.227 mg/mL = 20 mM
Storage Temperature and Stability	Powder: -20°C 3 years 4°C 2 years In solvent: -80°C 6 months -20°C 1 month
References	Hu, et al. 2011. Efficient generation of transgene-free induced pluripotent stem cells from normal and neoplastic bone marrow and cord blood mononuclear cells. <i>Blood</i> . 117(14): 109-119. Lin, et al. 2009. A chemical platform for improved induction of human iPSCs. <i>Nature Methods</i> . 6: 805-808. Xu, et al. 2010. Revealing a core signaling regulatory mechanism for pluripotent stem cell survival and self-renewal by small molecules.